

# Sachem Health Education



## High School Workbook 2016-2017

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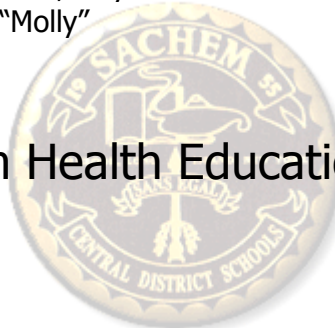
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Written by Sachem Health Education Department 2017

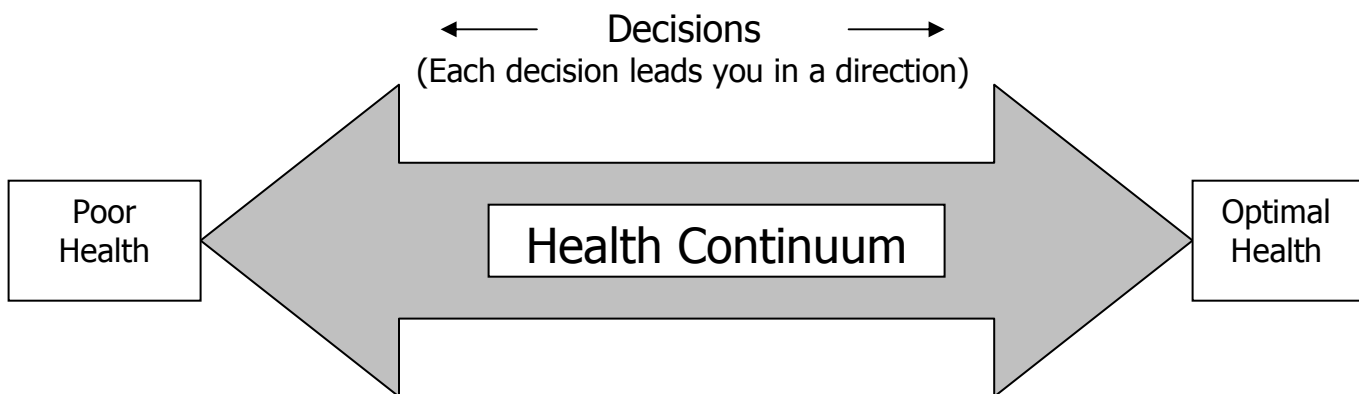


# What is Health?

**Health is a combination of your physical, mental and social well-being, not merely the absence of disease or infirmity.**



- Health is the combination of your physical, mental/emotional, and social well-being.
- These three elements of health are interconnected.
- To be truly healthy, all sides of your health triangle must be in balance.
- Your health is on a sliding scale with many degrees of health and wellness.
- Your health fluctuates along a continuum... from day to day and year to year, depending on different factors, many of which are **your** choices.



## Making Changes for Health

Health professionals have studied the process of behavior change and have come to the conclusion that there are four important steps:

- Awareness (recognizing the problem)
- Knowledge (reliable fact based information)
- Decision Making
- Apply the skill

# High School Lifestyle Appraisal

This Lifestyle Appraisal has been adapted from a previous version. Please circle the value of the answer for each question and add your points for each section and then total the sections.

<u>I. General Lifestyle</u>	<u>Yes or N/A</u>	<u>No or Not Sure</u>
1. My weight is within 15% of my ideal weight.	2	1
2. I do not have problems with my appetite.	2	1
3. I minimize extra salt intake and watch my sodium.	2	1
4. I eat at least 2 fruits and 3 vegetables daily.	2	1
5. I don't drink soda or other beverages with high fructose corn syrup .	2	1
6. My diet does not require supplements.	2	1
7. I eat three or more small meals daily.	2	1
8. I consume at least 25g of fiber daily.	2	1
9. I drink enough water to keep my urine light in color.	2	1
10. I do not drink beverages that contain (ethyl) alcohol.	2	1
11. I do not smoke cigarettes or any other substance.	2	1
12. If someone is smoking around me, I usually leave or ask them not to smoke.	2	1
13. I brush and floss my teeth daily.	2	1
14. My immunizations are up to date.	2	1
15. I know how to take my temperature and pulse rate.	2	1
16. I get medical attention when I feel it is necessary.	2	1
17. I usually sleep at least eight hours per night.	2	1
18. I do breast or testicular self-exams as well as ABCDE checks for cancer monthly.	2	1
19. I do not take drugs casually, only medications prescribed by a physician or OTC for medicinal reasons.	2	1
20. I watch the amount of saturated fat I consume, and frequently make low fat choices. (Excluding trans/animal/partially hydrogenated fats)	<u>2</u>	<u>1</u>
<b>Totals for this section:</b>	_____	_____

<u>II. Coping Skills</u>	<u>Yes or N/A</u>	<u>No or Not Sure</u>
1. I enjoy school.	2	1
2. I trust and value my own judgment.	2	1
3. When I make mistakes, I usually admit to them and learn from them.	2	1
4. I value my own opinions but I can appreciate the views of others.	2	1
5. I can recognize and accept my feelings of being angry, sad, happy, and frightened.	2	1
6. I usually know how to deal with my feelings.	2	1
7. I know where to get help and would do so if I could not deal with my feelings.	2	1
8. I can say "no" without feeling guilty.	2	1
9. I set realistic objectives for myself.	2	1
10. I can establish and maintain friendships.	2	1
11. I can accept responsibility for my actions.	2	1
12. I can set limits for myself and follow through.	2	1
13. I am enthusiastic about life.	2	1
14. I am able to give and receive love.	2	1
15. I know how to relax my body and mind without using drugs.	2	1

**Totals for this section:**

\_\_\_\_\_

<u>III. Survival Skills</u>	<u>Yes or N/A</u>	<u>No or Not Sure</u>
1. I know how to do basic first aid procedures.	2	1
2. I am familiar with water and boating safety procedures.	2	1
3. I know how to swim or how to stay afloat until rescued.	2	1
4. I never ride with drivers who use alcohol or use drugs.	2	1
5. I wear a seat belt 100% of the time I am in a vehicle.	2	1
6. I have taken a course in driver education or defensive driving.	2	1
7. I wear a helmet while riding a motorcycle or bicycle.	2	1

8. I understand basic self-defense skills.	2	1
9. I avoid situations where I might get attacked or injured.	2	1
10. I do not carry weapons but if I did I would observe safety precautions.	2	1

**Totals for this section:** \_\_\_\_\_

**IV. Fitness** Yes or N/A No or Not Sure

1. My resting pulse rate is 60 per minute or less.	2	1
2. I do not use escalators or elevators if stairs are an option.	2	1
3. My daily activities include moderate physical effort (mowing the lawn, washing the car, helping around the house).	2	1
4. My daily activities include vigorous physical effort (doing construction work, heavy yard work, team sports etc..)	2	1
5. I regularly walk or ride a bike for exercise.	2	1
6. I jog or walk two or more miles, three or more times per week.	2	1
7. My screen-time is less than 2 hours per day.	2	1
8. I always do a five-minute warm-up before and a five-minute cool-down after an aerobic exercise.	2	1
9. I take part in a strenuous sport more than once a week.	2	1
10. I wear proper shoes and clothing whenever I exercise.	2	1
11. I practice yoga or some other type of stretching-limbering exercise for 15 to 20 minutes, three or more times a week.	2	1

**Totals for this section:** \_\_\_\_\_

**Grand Total Score** 

Now, go back and add your score from each section to calculate your grand total.

**Grand Total Score** \_\_\_\_\_

**HOW DID YOU SCORE?**

- [        ] Excellent            96-112 (Way to go)
- [        ] Good                86-95 (You're on the right path)
- [        ] Risky                76-85 (Changes needed)
- [        ] Hazardous            75 or lower... immediate need for improvement

## How Can I Improve My Self-Esteem?

Steve's mind wanders as he does his homework. "I'm never going to do well on this history test," he thinks. "My dad's right, I'm just like him — I'll never amount to much." Distracted, he looks down and thinks how skinny his legs are. "Ugh," he says to himself. "I bet the football coach won't even let me try out when he sees what a wimp I am."

Julio is studying for the same history test as Steve, and he's also not too fond of the subject. But that's where the similarity ends. Julio has a completely different outlook. He's more likely to think, "OK, history again, what a pain. Thank goodness I'm acing the subject I really love — math." And when Julio thinks about the way he looks, it's also a lot more positive. Although he is shorter and skinnier than Steve, Julio is less likely to blame or criticize his body and more likely to think, "I may be skinny, but I can really run. I'd be a good addition to the football team."

We all have a mental picture of who we are, how we look, what we're good at, and what our weaknesses might be. We develop this picture over time, starting when we're very young kids. The term **self-image** is used to refer to a person's mental picture of himself or herself. A lot of our self-image is based on interactions we have with other people and our life experiences. This mental picture (our self-image) contributes to our **self-esteem**.

Self-esteem is all about how much we feel valued, loved, accepted, and thought well of by others — and how much we value, love, and accept ourselves. People with healthy self-esteem are able to feel good about themselves, appreciate their own worth, and take pride in their abilities, skills, and accomplishments. People with low self-esteem may feel as if no one will like them or accept them or that they can't do well in anything.

We all experience problems with self-esteem at certain times in our lives — especially during our teens when we're figuring out who we are and where we fit in the world. The good news is that, because everyone's self-image changes over time, self-esteem is not fixed for life. So if you feel that your self-esteem isn't all it could be, you can improve it.

### **Self-Esteem Problems**

Before a person can overcome self-esteem problems and build healthy self-esteem, it helps to know what might cause those problems in the first place. Two things in particular — how others see or treat us and how we see ourselves — can have a big impact on our self-esteem.

Parents, teachers, and other authority figures influence the ideas we develop about ourselves — particularly when we are little kids. If parents spend more time criticizing than praising a child, it can be harder for a kid to develop good self-esteem. Because teens are still forming their own values and beliefs, it's easy to build self-image around what a parent, coach, or other person says.

Obviously, self-esteem can be damaged when someone whose acceptance is important (like a parent or teacher) constantly puts you down. But criticism doesn't have to come from other people. Like Steve in the story above, some teens also have an "inner critic," a voice inside that seems to find fault with everything they do. And, like Steve, people sometimes unintentionally model their inner voice after a critical parent or someone else whose opinion is important to them.



Over time, listening to a negative inner voice can harm a person's self-esteem just as much as if the criticism were coming from another person. Some people get so used to their inner critic being there that they don't even notice when they're putting themselves down.

Unrealistic expectations can also affect a person's self-esteem. People have an image of who they want to be (or who they think they should be). Everyone's image of the ideal person is different. For example, some people admire athletic skills and others admire academic abilities. People who see themselves as having the qualities they admire — such as the ability to make friends easily — usually have high self-esteem.

People who don't see themselves as having the qualities they admire may develop low self-esteem. Unfortunately, people who have low self-esteem often *do* have the qualities they admire. They just can't see that they do because their self-image is trained that way.

### Why Is Self-Esteem Important?



#### Beware the Perfectionist!

Are you expecting the impossible? It's good to aim high, but your goals for yourself should be within reach. So go ahead and dream about being a star athlete — but set your sights on improving your game in specific ways.

How we feel about ourselves can influence how we live our lives. People who feel that they are likable and lovable (in other words people with good self-esteem) have better relationships. They are more likely to ask for help and support from friends and family when they need it. People who believe they can accomplish goals and solve problems are more likely to do well in school. Having good self-esteem allows you to accept yourself and live life to the fullest.

### Steps to Improving Self-Esteem

If you want to improve your self-esteem, here are some steps to start empowering yourself:

- **Try to stop thinking negative thoughts about yourself.** If you're used to focusing on your shortcomings, start thinking about positive aspects of yourself that outweigh them. When you catch yourself being too critical, counter it by saying something positive about yourself. Each day, write down three things about yourself that make you happy.
- **Aim for accomplishments rather than perfection.** Some people become paralyzed by perfection. Instead of holding yourself back with thoughts like, "I won't audition for the play until I lose 10 pounds," think about what you're good at and what you enjoy, and go for it.
- **View mistakes as learning opportunities.** Accept that you will make mistakes because everyone does. Mistakes are part of learning. Remind yourself that a person's talents are constantly developing, and everyone excels at different things — it's what makes people interesting.
- **Try new things.** Experiments with different activities that will help you get in touch with your talents. Then take pride in new skills you develop.
- **Recognize what you can change and what you can't.** If you realize that you're unhappy with something about yourself that you can change, then start today. If it's something you can't change (like your height), then start to work toward loving yourself the way you are.
- **Set goals.** Think about what you'd like to accomplish, then make a plan for how to do it. Stick with your plan and keep track of your progress.

- **Take pride in your opinions and ideas.** Don't be afraid to voice them.
- **Make a contribution.** Tutor a classmate who's having trouble, help clean up your neighborhood, participate in a walk-a-thon for a good cause, or volunteer your time in some other way. Feeling like you're making a difference and that your help is valued can do wonders to improve self-esteem.
- **Exercise!** You'll relieve stress, and be healthier and happier.
- **Have fun.** Ever found yourself thinking stuff like "I'd have more friends if I were thinner"? Enjoy spending time with the people you care about and doing the things you love. Relax and have a good time — and avoid putting your life on hold.

It's never too late to build healthy, positive self-esteem. In some cases where the emotional hurt is deep or long lasting, it can take the help of a mental health professional, like a counselor or therapist. These experts can act as a guide, helping people learn to love themselves and realize what's unique and special about them.

Self-esteem plays a role in almost everything you do. People with high self-esteem do better in school and find it easier to make friends. They tend to have better relationships with peers and adults, feel happier, find it easier to deal with mistakes, disappointments, and failures, and are more likely to stick with something until they succeed. It takes some work, but it's a skill you'll have for life.

Reviewed by: Barbara P. Homeier, MD/ April 2006

1. Define the term self-image as used in the article.
2. According to the article, what is self-esteem?
3. What two things have a big impact on developing problems with self-esteem?
4. How does self-esteem influence our lives?
5. List the ten steps to improving self-esteem.
6. What are some of the positive results of living with a high self-esteem?

# The Seven Habits of Highly Effective Teens

*The 7 Habits of Highly Effective Teens* is a book written by Sean Covey. His father, Steven Covey wrote the book *The 7 Habits of Highly Effective People*. Both books deal with behaviors/habits that everyone can develop.

## The seven habits are:

**Habit 1 - Be Proactive:** Every day you have the choice to be proactive or reactive. The choice is yours. Reactive people make decisions/choices on impulse. Proactive people make decisions/choices based on their values. You are the captain of your destiny; you can choose your attitude. You can choose to be happy or miserable. You are in the driver's seat; not just a passenger. Take the initiative and the responsibility to make things happen. *"I am a responsible person. I take initiative. I choose my actions, attitudes, and moods. I do not blame others for my wrong actions."*



**Give an example of when a high school student should be proactive:**

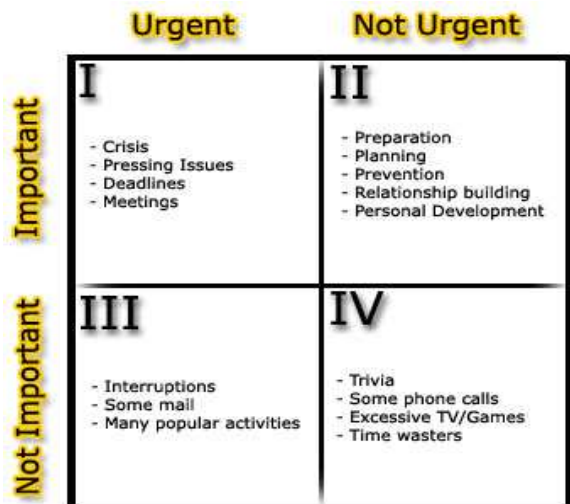
**Habit 2 - Begin with the end in mind:** You need to know your values and set some goals. Get an idea of the direction you are headed. It is much easier to put together a puzzle if you have a clear picture. You will have many important decisions to make in the coming years. Make sure you make the decisions that are right for you. *"I plan ahead and set goals. I do things that have meaning and make a difference. I am an important part of my classroom and I contribute to my school's mission and vision. I look for ways to be a good citizen."*



**List 3 goals that you have for each of the time frames:**

6 months	1 year	5 years	10 years

**Habit 3 - Put First Things First:** This habit is about learning to prioritize and manage your time so that you put first things first. There are things that are urgent and not urgent... these are then important or not important. You need to decide what things are most important and make sure to get them done. Agenda books help with this task. *"I spend my time on things that are most important. This means I say no to things I know I should not do. I set priorities, make a schedule, and follow my plan. I am disciplined and organized."*





**Make a list of things you need to get done today/tomorrow and then prioritize this list:**

Things I need to do	Things I need to do prioritized

**Habit 4 - Think Win-Win:** See life as a cooperative, not a competitive arena where success is not achieved at the expense or exclusion of others. *"I balance courage for getting what I want with consideration for what others want. When conflicts arise, I look for a win-win solution."*



**Write out a scenario for a win-win situation:**

**Habit 5 - Seek first to understand and then to be understood:** Learn to listen... watch body language... hear what the person really means. The word empathy comes to mind here. Try to understand and walk a mile in other person's shoes. Remember when giving feedback it needs to be constructive. "I" messages are important to use. *"I listen to other people's ideas and feelings. I try to see things from their viewpoint."*

There are two basic forms of communication:

- **Verbal** – communication through the spoken word; it is important to be clear about the meaning of what you are saying
- **Nonverbal** – communication through body language – can often say as much as the spoken word; body language includes facial expressions, body movement, posture, and gestures



**Are misunderstandings more likely to happen in person or while texting/messaging on social media? Explain your answer.**

**Habit 6 - Synergize:** Teamwork, open-minded, finding new and better ways... celebrate our differences.... Everyone has their strengths... we just need to find them. *"I value other people's strengths and learn from them. I get along well with others, even people who are different than me. I work well in groups. I seek out other people's ideas because I know that by teaming with others, we can create better solutions than any one of us can alone."*



**Why do colleges and employers look for applicants who work well with others?**

**Habit 7 - Sharpen the Saw:** You need to find time for yourself. Stress reduction, eat well, exercise, review what is important to you, read, take time to review your goals and more. *"I take care of my body by eating right, exercising, and getting enough sleep (body). I learn in lots of places, not just at school (brain). I spend time with family and friends (heart). I take time to find meaningful ways to help people (soul). I balance all four parts."*



**What do you do to "sharpen the saw"?**

# The Value of Good Health

## Think About It: Take Care

Using the questions below, discuss and develop responses to the quotation your group has been given. Write down any interesting ideas that you hear from other group presentations.

1. "So many people spend their health gaining wealth, and then have to spend their wealth to regain their health."  
-**J. Reb Materi**
2. "Health is not simply the absence of sickness."  
-**Hannah Green**, author of *I Never Promised You a Rose Garden*
3. "You cannot shake hands with a clenched fist."  
-**Indira Gandhi**, former Prime Minister of India
4. "You have brains in your head and feet in your shoes, you can steer yourself in any direction you choose!"  
-**Dr. Seuss**
5. "Things which matter most must never be at the mercy of things that matter least."  
-**Johann Goethe**
6. "Our lives begin to end the day we become silent about things that matter."  
-**Dr. Martin Luther King, Jr.**, *Civil Rights Activist*
7. "Pay the farmer now, or pay the doctor later."  
-**author unknown**

**Discussion Points**  
- What is your quote's subtext – what is it really talking about?  
- Do you agree with your quote? Why?  
- What health behavior do you think your quote is talking about?

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**Write down your thoughts on the following questions. Discuss as a class.**


1. What do people do to protect or improve their health?
2. What do people do to put their health at risk?
3. What are some benefits of taking care of your health?
4. What are some short- and long-term consequences of not paying attention to your health or of taking risks with it?

# The Value of Good Health

## Do It Now: Set a Health Goal

There is always something we can do to improve our health. Choose a health goal you think you can realistically accomplish in the next month. Write it in the chart, and then write down the measurable and manageable steps you will take to achieve it, following the process outlined by your teacher.

**Tips on achieving a goal**



1. Decide on your goal.
2. Break down your goal into measurable, manageable steps.
3. Write down the steps and when and how you plan to work on them.
4. Keep track of your progress.
5. Evaluate what did or did not work and make any changes necessary.

Steps to Successful Goal-Setting				
Name:				
Health Goal:				
Measurable steps to the goal	When do I start?	Resources needed	Did I achieve it?	Why not?/ Solution

# Decision-Making for Health

## Decisions, Decisions

Write down five decisions that you make every day and check off whether your choices are healthy or unhealthy.

Everyday decisions	Healthy	Unhealthy
<i>Example: not wearing a seatbelt</i>		
1.		
2.		
3.		
4.		
5.		

Write down two health-related decisions you've made in the past that you would change, what influenced you to make them, and what impact they have had.

Unhealthy decisions	Influence	Impact
<i>Example: stayed out in sun all day without sunscreen</i>		
1.		
2.		

### Reflection

What do your decisions say about you-about who you are and what you value?

### DECIDE: A Decision-Making Method

Some decisions are easy, but others are difficult because a person might feel *ambivalent* (be able to see the benefits of different choices.) Using the DECIDE method can help you make decisions when you are facing a *dilemma* (a situation with more than one possible outcome) and unsure of what to decide.

<b>D</b>	Define the problem
<b>E</b>	Explore the alternatives
<b>C</b>	Consider the consequences
<b>I</b>	Identify your values
<b>D</b>	Decide and Act
<b>E</b>	Evaluate your decision

# Risk-Taking and Values

Knowing what we value is an important first step in deciding whether to take a risk.

To **value** is to have respect, esteem, or appreciation for an object, relationship or idea.

Write down four things you value and why:	Do you take High, Medium, or Low risks with it?
<i>Example:</i> <b>An object:</b> cell phone, stay connected to my friends	Medium, keep it with me
<b>1. an object</b>	
<b>2. a relationship</b>	
<b>3. an idea</b>	
<b>4. your health</b>	

What do you do to protect these and show you value them?

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Why is it important to prioritize your values?

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## Tips for Assessing Risk

1. Know what kind of risk taker you are...do you live on the edge?
2. Be aware of group energy. (peer pressure)
3. Watch out for the influence of alcohol and other drugs.
4. For some things there is no safe level of risk.
5. When in doubt, talk it out with someone you trust
6. Always measure the likely results against what you value.
7. If you've done something before, your perceptions of its riskiness is lower.

**Probability is a measure of the likelihood that something will happen.**



## Do It Now: Risky, Riskier, Riskiest

With your group come up with conditions you think would raise or lower each risk in the chart below

Low Risk	Medium Risk	High Risk
Riding a bike with a helmet	Riding a bike on a side-street without a helmet	Riding a bike without a helmet in heavy traffic
	Having a couple of cigarettes	
		Getting drunk with a friend
Getting a ride home from a party with a friend		
	Asking a friend for advice about medication to help you sleep	

## Make it Happen: Playing It Safe

Using an article or video provided to you in class, answer the following questions. Using the DECIDE model.

<b>D</b>	
<b>E</b>	
<b>C</b>	
<b>I</b>	
<b>D</b>	
<b>E</b>	

# Images: Self and Culture

## Concepts

**Culture** is the shared ideas, activities, language, and social expressions (food, music, clothing, etc.) of the members of one group that distinguishes it from another. It is part of our self-image.

**Media influence** affects how we think about ourselves and our cultures.

## How the Media Can Influence Our Perceptions

**Information and Entertainment:** The media offer us abundant distractions. They dispense information and can entertain us 24 hours a day. They comprise valuable resources to help us learn and expand our worlds. But this valuable distraction has a downside. For example, the *Archives of Pediatrics and Adolescent Medicine* reported in 2005 that children with TVs in their bedrooms consistently score lower on math and language tests. And studies show that young people spend almost 45 hours a week with media- usually with more than one format a time. Streaming through these multiple outlets are endless messages and images that shape our values and behavior.

**Health:** TV viewers may develop dangerous health attitudes from seeing characters eat and drink too much and live recklessly without suffering any ill effects, as reported in the *New England Journal of Medicine*. However, national surveys show that the Internet is an important source of information for youth, as 39% of 15 to 24-year-olds who have sought health information online say they have changed their personal behavior because of the information they found online (The Kaiser Foundation, 2001).

**Gender:** Some programs and ads in the media portray the sexes in nontraditional roles: a female executive or a male who stays at home to parent the children. Others reinforce more traditional female and male roles. While the media can portray unrealistic physical ideals for both females and males, research also shows that exposure to sports media can reinforce healthier body images for teens. A 2001 study at the University of Michigan found this was especially true of adolescent girls who regularly read sports magazines.

**Sex and Dating:** Teens report that the media are a primary source of information about sex, dating, and sexual health. It is common for a TV show to contain overt sexual content, but it is still rare for shows to discuss the risks and possible consequences of sexual activity. Fashion and beauty magazines targeting female teens can also be important sources of sexual health information- The Kaiser Foundation reports seven out of ten girls ages 12-18 read such magazines, and a large majority say the magazines contain information they don't get elsewhere.

## Concept

**Targeting** is shaping messages so that they attract a specific group of people who share individual or cultural interest beliefs and practices.

# The Media and Health: Media Log

Record all of the media that you use for one day and how you use them. Add more sheets if you need to. Be sure to complete the reflection at the bottom of the page.

Name and type of media	Where, when, and with whom	How long I used the media	Reason*	One message I got from the media
<b>Example:</b> WROC radio	<b>Example:</b> home, morning, alone	<b>Example:</b> 1/2 hour	<b>Example:</b> wake up, coping	<b>Example:</b> practical jokes can humiliate people

## Reflection:

1. One thing I learned from the log about my media use is:
  
2. One thing that surprised me about my media use is:
  
3. One way media use impacts my life is:
  
4. One media message about self or culture that I heard/saw that I think is inaccurate is:

# The Media and Health: Tuning In

Many popular songs have messages in them about health issues like violence, risky driving, substance use, nutrition, and even body image. Listen to the selected song or think of a song you already know and answer the following questions.

Song: \_\_\_\_\_

Artist: \_\_\_\_\_

1. What health behaviors do you hear about in this song?
2. What messages does the song give about those behaviors?
3. How does the song deliver those messages? For example, does it use certain images?
4. Do these messages match with what is popular or socially acceptable for you or the culture you identify with?
5. Which strategies for resisting messages do you think that you can use to resist messages that are not acceptable to you?

*If you would prefer you may use another type of media, such as TV show, movie, or internet site*

# Family Communications

## Make It Happen: Family Interview

1. Read over the interview questions on the next page. Add two more questions that you can think of on this topic to the worksheet.
2. Set up a time before your next class for your interview. Let your interviewee know that it will take about 30 minutes. Be sure to ask all of the questions on the next page, but remember to include the questions you added.
3. Follow your teacher's instructions on how to complete and submit your Family Interview Worksheet and Reflection.



### **Tips for Interviewing**

**There are a few points to keep in mind while doing your interview:**

- Find a time that's convenient for both of you.
- Use the verbal and non-verbal communication skills that you learned about in this unit.
- Ask if you can record the interview, since it will help you focus on the questions and answers. Try to take notes when reviewing the recording.
- If you don't record, write down notes while you're interviewing that you can use to remind yourself later what the person said.
- If you want to know more about what the person said, ask a follow-up question.

**Remember, an important part of this activity is to have fun! 😊**

# Family Interview Worksheet

\_\_\_\_\_  
Interviewer

\_\_\_\_\_  
Name of Interviewee

\_\_\_\_\_  
Relationship to You

\_\_\_\_\_  
Date

**"Thank you for agreeing to do this interview. I'd like to start by asking you some questions about when you were my age."**

1. What did you like to do when you were my age?

2. What did you want to be when you got older?

3. What rules and expectations did your family have?

4. What messages did you get from your parents about alcohol, tobacco, and other drugs?

**"Now I'd like to ask you some questions about your role as a caregiver."**

5. What are your rules and expectations for me about the use of alcohol, tobacco, and other drugs?

6. What are the consequences for me if I don't follow these rules?

7. Why do you think these rules are important?

8. What do you think is the most challenging part of taking care of a young adult?

9. What have you liked about participating in this interview?

## Sample Follow-Up Responses

"Tell me more."

"Can you give me an example?"

"Then what did you do?"

"Is there anything else?"

# Communicating for Understanding Skills

## Communication Skills

**These Communicating for Understanding Skills follow five steps so that each person in the conversation understands what the other is saying – whether they agree or not.**

- Step 1: Initiate**
- Step 2: Mirror**
- Step 3: Summarize**
- Step 4: Validate**
- Step 5: Empathize**

### Concepts

**Validate** means showing you value the other person's opinions even if you don't agree.

**Empathize** means understanding and being sensitive to the other person's feelings, thoughts, and experience.

\* Each step uses its own kind of sentence stems, examples of which are below.

### 1. Initiate

The sender asks for some time to talk.

**Sender:** "Can we talk?"

**Receiver:** "Sure. What's on your mind?"

**Sender:** "I really want you to stop hanging out at the basketball courts. I've been hearing about drugs being sold and fights there."

### 2. Mirror (paraphrase/restate)

The receiver checks for understanding about what the sender has said and means. This step should continue until the receiver understands the sender's message.

**Receiver:** "So, if I've got it, what I'm hearing you say is that you've heard stories about fights and drug dealing at the courts and you want me to stop hanging out there. Is there anything more you'd like me to know?"

**Sender:** "I know that you and your friends like to play ball there, but I'm worried about your safety."

### 3. Summarize

The receiver summarizes the key parts of what the sender has said.

**Receiver:** "So let me see if I've got it all. You know my friends and I like to play ball at the courts, but you've heard a lot of stories about fights and drug dealing there, and you're worried about my safety so you'd like me not to hang out there. Did I get it all?"

**Sender:** "You've got it!"

### 4. Validate

The receiver shows understanding and valuing of the sender's point of view even if they don't agree.

**Receiver:** "I understand that you're concerned about my safety and I can see it's important to you because there have been some fights at the courts. I'll talk to my friends and figure out where else we can go."

### 5. Empathize

The receiver expresses care and sensitivity to the sender's feelings, thoughts, or experience.

**Receiver:** "I imagine you feel worried when I'm at the courts."

**Sender:** "Yes, it does worry me. Now is there anything you want to talk to me about?"

# The Art of Assertiveness

## Concepts

**Asserting yourself** means standing up for yourself while simultaneously respecting the rights of others.

**The power of persuasion** involves convincing or urging someone to take an action and /or follow a belief. When you are persuaded by someone, you respond to their influence to think in a particular way and to behave in line with it.

Sometimes close relationships can challenge your boundaries and beliefs about who you are and what is right for you. Sometimes you won't agree with the other person's beliefs, attitudes, or actions. Sometimes you'll feel let down or disappointed by your relationships. Assertiveness is a skill that can help you keep your boundaries and get your needs met in a way that respects yourself and the relationships you value.

## Asserting Yourself

These techniques can help you maintain your boundaries and values and get your needs met in close relationships.

Scene: There's a party at the home of a girl whose parents are away for the weekend. Your parents don't allow you to go to parties if there's no responsible adult present. All of your friends are going and are pressuring you to go too. You know you'll get in trouble with your parents if you go, plus you're concerned about the reputation for trouble of some of the people who are going to be there.

1. State the problem.	"I really don't want to end up at a party where the police might show up."
2. Be understanding.	"I know that you all want me to go and that it's a big party. And we always have a good time together."
3. Ask for a change.	"But I really don't feel safe going to this one. Let's find something else to do."
4. Offer a suggestion or ask for their ideas.	"How about we rent some DVDs and watch them at my house? Or go to a late movie?" "What ideas do you have about something else we could do?"
5. Show your appreciation if your suggestion is accepted or need is met.	"Thanks. I really appreciate your being willing to come up with an alternative."
6. Express your regrets if the request isn't met and let the other person know what action you are going to take.	"I'm really sorry that we can't agree on what to do tonight. I'm going to go catch a late movie. I'll call you tomorrow to find out how the party was. Or call me later if you change your mind."
7. Follow through with what is right for you and respect the other person's choice.	



# Practicing Assertiveness

Describe a situation where you often find it difficult to be assertive.

Situation	Who	Feel/Think
<b>Example:</b> <i>choosing a movie to see</i>	<b>Example:</b> <i>friend</i>	<b>Example:</b> <i>annoyed/I'm tired of action movies</i>

Answer the questions using one of these scenarios

## Asserting yourself Scenarios

It's Friday night. Rosie, Ahad, Jack, and Zoe are hanging out at Rosie's house. Ahad suggests that the evening would be a lot less boring if they forwarded an inappropriate picture of his ex-girlfriend. Jack and Zoe are up for it and start creating a distribution list, but Rosie isn't sure. She remembered a similar incident occurring to one of her sister's friends. Jack and Zoe tell her not to be a drama queen and Ahad promises it is just a joke and nobody is getting hurt.

1. What is the problem?
2. What options would you suggest?
3. List resources that would be valuable to you in this situation?

# Family Health History

## **Medical history: How to compile your medical family tree**

Your family medical history — sometimes called a medical family tree or pedigree — is a record of illnesses and medical conditions affecting your family members. Similar to a family tree you might have drawn in school, a family medical history is a visual representation of the relationships among members of your family, but it also includes information for each person about diseases, age of disease onset, causes of death and other relevant health information.

## **How is a family medical history used?**

You inherit half of your genetic profile from each biological parent. Along with the genetic information that determined your appearance, you inherited genes that may cause or increase your risk of certain medical conditions. Except for a relatively small number of genes, the identities of most disease-associated genes remain unknown.

A family medical history can serve as a "substitute" genetic test to help your doctor interpret the history of disease in your family and identify patterns that may be relevant to your own health. Your doctor and other health care professionals may use your family medical history to:

- Assess your risk of certain diseases
- Recommend changes in diet or other lifestyle habits that can lower disease risk
- Recommend treatments that can modify disease risk
- Determine what diagnostic tests to order
- Determine the type and frequency of appropriate disease screening tests
- Determine whether you or family members should get a specific genetic test
- Identify a condition that might not otherwise be considered by your doctor
- Identify other family members who are at risk of developing a certain disease
- Assess your risk of passing conditions on to your children

A family medical history can't predict your future health. With few exceptions, it only provides information about risk. Other factors — such as your diet, weight, exercise routine, other lifestyle habits, and exposure to pollutants or environmental factors — will also raise or lower your risk of developing certain diseases.

## What information should you include in a family medical history?

If possible, your family medical history should include at least three generations. Compile information about your grandparents, parents, uncles and aunts, siblings, cousins, children, nieces and nephews, and grandchildren. For each person, gather the following information:

- Sex
- Date of birth
- For deceased relatives, age at the time of death and cause of death
- Diseases or other medical conditions
- Age of disease onset
- Diet, exercise habits, smoking habits or history of weight problems

Ask about the occurrence of the following diseases and medical conditions often associated with genetic risk:

- Cancer
- Heart disease
- Diabetes
- Asthma
- Arthritis
- Mental illness
- High blood pressure
- High cholesterol
- Stroke
- Kidney disease
- Alcoholism or other substance abuse
- Birth defects
- Vision loss
- Hearing loss
- Learning disabilities
- Mental retardation
- Miscarriages or stillbirths

## For help with your family health history tree:

### The following websites provide additional information on family history:

- CDC's Family History Web site for the public — <http://www.cdc.gov/genomics/public/famhist.htm>
- U.S. Surgeon General's Family History Initiative — <http://www.hhs.gov/familyhistory/>
- National Society for Genetic Counselors — <http://www.nsgc.org/consumer/familytree/>

For more information on CDC's National Office of Public Health Genomics, visit the website at <http://www.cdc.gov/genomics>

1. Why is compiling your family health history important?
2. Name 5 diseases that might run in families.
3. Who should have access to your family health history information?

# Pretest Mental Illness

**Answer the following questions true or false.**

- \_\_\_\_\_ 1. Serious mental illness can happen in any family.
- \_\_\_\_\_ 2. The suicide rate for people who suffer from mental illness is greater than the general public.
- \_\_\_\_\_ 3. Psychopath and psychotic mean the same thing.
- \_\_\_\_\_ 4. The great majority of people with mental illness are not violent.
- \_\_\_\_\_ 5. Abuse of drugs and alcohol may be a way people with mental illness medicate themselves to relieve their symptoms.
- \_\_\_\_\_ 6. Mental illness and mental retardation are the same thing
- \_\_\_\_\_ 7. People with mental illness can pull themselves together and be normal if they try hard enough.
- \_\_\_\_\_ 8. Mental illness strikes one in five people at some point in their lives
- \_\_\_\_\_ 9. Mental illness is a physical illness affecting the brain.
- \_\_\_\_\_ 10. All people with mental illness live in their own world and are out of contact with reality all of the time.

## Resources for Mental Health

**School:** Guidance counselor, School Social Worker, School Psychologist, Substance Abuse Counselor, School Nurse, etc.

**Community:** Psychiatrist, Psychologist, Social Worker, Substance Abuse Counselor, Community Resource Database of Long Island 2-1-1 LI Database  
<https://211longisland.communityos.org/cms/>  
(Response of Suffolk County ((631)751-7500 HOTLINE)

# Mental Health: Use the Right Words

Slang words like “psycho”, “schizo” and “wacko” demean people who struggle to cope with serious treatable illnesses. Derogatory references to people with psychiatric symptoms are as inappropriate as for any other illnesses or disability. Labels like “looney bin”, “insane asylum” and “funny farm” are humiliating to those who require medical help from hospitals. “Hospital” or “psychiatric hospitals” are preferable. Labels that equate people who have a mental illness with their illnesses (e.g. schizophrenics, manic depressives) are dehumanizing and offensive. It is better to say “a person with ...” a specific condition.

“Psychotic” and “psychopathic” are NOT the same. “Psychotic” describes a period of disorientation in the course of an illness like schizophrenia, manic depression or depression. Psychotic symptoms are generally treatable with appropriate medication. “Psychopathic” disorders generally do not respond to medication. Schizophrenia, major depression, and manic depression are the most prevalent psychiatric conditions involving psychotic symptoms.

## Definitions:

**Bipolar Disorder:** (also known as Manic Depression) An illness in which periods of mania, depression, and normal moods alternate. Mania is typically characterized by overconfidence, delusions of grandeur, racing thoughts, recklessness and little need for sleep. During the depressive phase of the illness the person may feel worthless, helpless, lose interest in normally pleasurable activities, sleep a great deal of the time, and think about death or attempt suicide. Over 10 million people in America have bipolar disorder, and the illness affects men and women equally.

**Dissociative Identity Disorder:** (also known as Multiple Personality Disorder) Presence of 2 or more personalities (called subpersonalities) within 1 person. Symptoms include flashbacks, using “we” or “us” when referring to self, noticing drastic differences in handwriting from time to time, finding yourself someplace and not knowing how you got there, and sometimes hearing voices. Additionally, accents, ways of thinking, and attitudes may differ among personalities, as well as allergies, right or left-handedness, and the need for eyeglasses. Treatments usually include psychotherapy and medication. About 20% of those affected are male.

**Generalized Anxiety Disorder:** Symptoms: Chronic, exaggerated worry, tension, and irritability that appear to have no cause or are more intense than the situation warrants. Physical signs, such as restlessness, trouble falling or staying asleep, headaches, trembling, twitching, muscle tension, or sweating, often accompany these psychological symptoms. Formal diagnosis: When someone spends at least six months worried excessively about everyday problems. Approximately 4 million American adults ages 18 to 54 have GAD.

**Major Depression:** Characterized by some or all of the following symptoms over an extended period of time: Difficulty sleeping or sleeping too much, constant fatigue, loss of interest in usually pleasurable activities, inappropriate guilt or feeling of worthlessness, difficulty concentrating or accomplishing tasks, recurrent thoughts of death or suicide, suicide attempts. Major depression is a serious medical illness affecting 15 million American adults, or approximately 5-8 percent of the adult population in a given year.

**Obsessive Compulsive Disorder:** Characterized by repeated, intrusive, and unwanted thoughts (obsessions) and/or rituals that seem impossible to control (compulsions). Adolescents may be aware that their symptoms don't make sense and are excessive, but younger children may be distressed only when they are prevented from carrying out their compulsive habits. Compulsive behaviors often include counting, arranging and rearranging objects and excessive hand washing. Affects 2 – 3% of all Americans.

**Panic Disorder:** Characterized by panic attacks. Results in sudden feelings of terror that strike repeatedly and without warning. Physical symptoms include chest pain, heart palpitations, shortness of breath, dizziness, abdominal discomfort, feelings of unreality and fear of dying. Children and adolescents with this disorder may experience unrealistic worry, self-consciousness and tension. It is estimated that 2 percent to 5 percent of Americans have panic disorder.

**Phobias/Anxiety Disorders:** A disabling irrational fear of something that poses little or no real danger. Fear leads to avoidance of objects or situations and can cause extreme feelings of terror, dread and panic which can substantially restrict one's life. Specific phobias center around particular objects (e.g. certain animals) or situations (e.g. heights or enclosed spaces). Common symptoms for children and adolescents with "social" phobia are hypersensitivity to criticism, difficulty being assertive and low self-esteem. Affects 1% of all Americans.

**Schizophrenia:** A thought disorder characterized by a false perception of reality. Typically people with schizophrenia experience auditory and/or visual hallucinations and delusions which are often paranoid in nature. Thinking can be illogical and emotions may be flat or inappropriate. Few, however, are totally out of contact with reality and symptoms are generally sporadic. Schizophrenia is a serious mental illness that affects 2.4 million American adults over the age of 18.

### **Neurobehavioral disorders:**

**Attention Deficit Hyperactivity Disorder:** (also known as ADHD) is a condition that becomes apparent in some children in the preschool and early school years. It is hard for these children to control their behavior and/or pay attention. The principle characteristics of ADHD are inattention, hyperactivity, and impulsivity. The Center for Disease Control and Prevention reports that ADHD affects an estimated 9 percent of children aged 3-17 and 2-4 percent of adults.

**Tourette syndrome (TS):** is a neurological disorder characterized by repetitive, stereotyped, involuntary movements and vocalizations called tics. The disorder is named for Dr. Georges Gilles de la Tourette, the pioneering French neurologist who in 1885 first described the condition in an 86-year-old French noblewoman. Symptoms can disappear for weeks or months at a time and severity waxes and wanes.

**Autism:** a developmental disorder that appears by age three and that is variable in expression but is recognized and diagnosed by impairment of the ability to form normal social relationships, by impairment of the ability to communicate with others, and by stereotyped behavior patterns especially as exhibited by a preoccupation with repetitive activities of restricted focus rather than with flexible and imaginative ones. Autism Spectrum Disorders affect an estimated two to six per 1,000 children and strike males about four times as often as females.



# Eating Disorders

## **Anorexia Nervosa**

Anorexia is characterized by an intense and irrational fear of body fat and weight gain even when markedly underweight; a misperception of body weight and shape to the extent of feeling or seeing fat even when emaciated. People who have anorexia develop unusual eating habits such as avoiding food, picking out a few foods and eating them in small amounts, weighing their food, and counting the calories of everything they eat. They may also exercise excessively as a method of getting rid of unwanted calories.

## **Bulimia Nervosa**

Bulimia is characterized by cycles of bingeing and purging. A person binges by rapidly consuming a large amount of food. The binge is then followed by attempts to rid the body of the food that was consumed by engaging in self-induced vomiting, use of laxatives, enemas, diuretics, excessive exercise, skipping meals, or dieting. People who suffer from bulimia eat an excessive amount of food in a single episode and almost immediately make themselves vomit or use laxatives or diuretics (water pills) to get rid of the food in their bodies. This behavior often is referred to as the "binge/purge" cycle. Like people with anorexia, people with bulimia have an intense fear of gaining weight.

## **Binge Eating Disorder (BED)**

The person diets, making herself or himself hungry, and then binges in response to that hunger. The person may also eat for emotional reasons: to comfort themselves, avoid uncomfortable situations, and numb feelings. People with this recently recognized disorder have frequent episodes of compulsive overeating, but unlike those with bulimia, they do not purge their bodies of food (NIMH, 2002). During these food binges, they often eat alone and very quickly, regardless of whether they feel hungry or full. They often feel shame or guilt over their actions. Unlike anorexia and bulimia, binge-eating disorder occurs almost as often in men as in women (National Eating Disorders Association, 2002).

## **Anorexia Athletica (Compulsive Exercising)**

Many people who are preoccupied with food and weight exercise compulsively in attempts to control weight in a misguided attempt to gain a sense of power, control, and self-respect.

## **Who has eating disorders?**

Research shows that more than 90 percent of those who have eating disorders are women between the ages of 12 and 25 (National Alliance for the Mentally Ill, 2003). However, increasing numbers of older women and men have these disorders. In addition, hundreds of thousands of boys are affected by these disorders (U.S. DHHS Office on Women's Health, 2000).

## **Psychological Factors that Contribute to Eating Disorders:**

- Low self-esteem
- Feelings of inadequacy or lack of control in life
- Depression, anxiety, anger, or loneliness

### **Interpersonal Factors that Contribute to Eating Disorders:**

- Troubled family and personal relationships
- Difficulty expressing emotions and feelings
- History of being teased or ridiculed based on size or weight
- History of physical or sexual abuse

### **Social Factors that Contribute to Eating Disorders:**

- Cultural pressures that glorify "thinness" and place value on obtaining the "perfect body"
- Narrow definitions of beauty that include only women and men of specific body weights and shapes
- Cultural norms that value people on the basis of physical appearance and not inner qualities and strengths

### **Other Factors that Contribute to Eating Disorders:**

- Scientists are still researching possible biochemical or biological causes of eating disorders. In some individuals with eating disorders, certain chemicals in the brain that control hunger, appetite, and digestion have been found to be imbalanced. The exact meaning and implications of these imbalances remains under investigation.

Eating disorders are complex conditions that can arise from a variety of potential causes. Once started, however, they can create a self-perpetuating cycle of physical and emotional destruction.

**All eating disorders require professional help.**

## **Eating Disorder Questions**

### **1. Anorexia Nervosa is a disease which can be partially attributed to**

- a. a. the media and social attitudes
- b. b. a high level of sugar in the blood
- c. c. food allergies
- d. d. too much insulin in the blood

### **2. Anorexia Athletica is a disease which is manifested by**

- a. a. excessive eating
- b. b. starvation
- c. c. excessive exercise
- d. d. excessive sleep

### **3. BED stands for**

- a. a. Bulimic Eating Disorder
- b. b. Binge Eating Disorder
- c. c. Bedtime Excessive Drowsiness
- d. d. Big Enormous Disaster

### **4. The majority of people with eating disorders are**

- a. a. females between the ages of 25-50
- b. b. males between 25-30
- c. c. males between 12-25
- d. d. females between 12-25

### **True or False**

\_\_\_\_\_ 5. Eating Disorders can be dealt with by a caring group of family and friends; no professional help is needed.

\_\_\_\_\_ 6. People with eating disorders often feel they have little control over other areas of their life.



# Mental Health Chart

Directions: Fill in the chart with the information provided.

Disorder	Description	Signs and Symptoms	Statistics
ADHD			
Bipolar Disorder			
Generalized Anxiety Disorder			
Major Depression			
Obsessive Compulsive Disorder			
Panic Disorder			
Phobias/Anxiety Disorders			
Schizophrenia			
Tourette Syndrome			
Autism			
Anorexia Nervosa			
Bulemia Nervosa			
Binge Eating Disorder			

# Teen Mental Health Problems: The Warning Signs

Mental health problems are real, painful and can be severe. They can lead to school failure, loss of friends, or family conflict. Some of the signs that may point to a possible problem are listed below.

## **Is troubled by feeling:**

- very angry most of the time, cries often or overreacts to things
- worthless or guilty a lot
- anxious or worried a lot more than other young people
- grief for a long time after a loss or death
- extremely fearful-has unexplained fears or more fears than most kids
- constantly concerned about physical problems or appearance
- frightened that his or her mind is controlled or is out of control

## **Experiences big changes, for example:**

- does much worse in school
- loses interest in things usually enjoyed
- has unexplained changes in sleeping or eating habits
- avoids friends or family and wants to be alone all the time
- daydreams too much and can't get things done
- feels life is too hard to handle or talks about suicide
- hears voices that cannot be explained

## **Is limited by:**

- poor concentration; difficulty making decisions
- inability to sit still or focus attention
- worries about being harmed, hurting others, or about doing something "bad"
- the need to wash, clean things, or perform certain routines dozens of times a day
- thoughts that race almost too fast to follow
- persistent nightmares

## **Behaves in ways that cause problems, for-example:**

- uses alcohol or other drugs
- eats large amounts of food and then forces vomiting, abuses laxatives, or takes enemas to avoid weight gain
- continues to diet or exercise excessively although bone-thin
- often hurts other people, destroys property, or breaks the law
- does things that can be life-threatening

# Stress

**Stress** is a feeling that's created when we react to particular events. It's the body's way of rising to a challenge and preparing to meet a tough situation with focus, strength, stamina, and heightened alertness.

## A. Categories of stress:

- **Eustress** – \_\_\_\_\_
- **Distress** – \_\_\_\_\_

B. **Stressors are anything that causes stress. They can include people, events, situations and more.**

### List your stressors:

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## C. Your body's reaction to stress:

- Adrenaline is released by the body to give you a spurt of energy

The **flight-or-fight** response is a natural response in humans and animals. In times of danger the response is automatically activated and hormones, including adrenalin, are released into the blood stream. The hormones help the body prepare either to stay and fight the danger or to run away from it. This is the body's normal response to danger.

As the hormones move through our body it 'shuts down' the non-essential organs including the bowel, bladder and stomach. Our heart begins to beat faster and we begin to breathe more rapidly to increase oxygen and blood to the lungs, brain and muscles. This is all done so that we may either stay and fight the situation or get out of it quickly. Other physiological sensations of the fight-or-flight response include shaking, trembling, and excessive perspiration. As a result of the bowel and bladder being 'shut down', some people feel an urgent need to urinate or feel as though they are going to have an attack of diarrhea. Others may feel as though they are going to be sick.

### Some signs of stress:

1. Constipation or diarrhea
2. Depression
- 3.
- 4.
- 5.

# Managing Stress, Anger, and Other Emotions

When **stress** (anxiety) and/or **anger** are added to another emotion, they can create an unbalanced **emotional extreme** (irrational outlook). Look at the list of emotions on the board. Choose one positive and one negative emotion (emotional responses) that you often feel. Think about recent triggers that made you feel the emotions and what you did (reactions). Describe them below.

TRIGGER	WHAT I FELT	WHAT I DID
<b>Example:</b> Got a good grade	Relieved 😊	Told my friends

## Reflection



- Think about how you responded to the trigger and what happened as a result. Was the result healthy or unhealthy?
- What do you wish you had done differently, if anything?

### Tips for Managing Emotions

- Some triggers may be more challenging for others than for you.
- You are unique in your emotions, how you feel them, and how you respond to them.
- Learning to manage powerful emotions can help you think more clearly and make decisions that benefit your life.
- If you don't learn how to manage your emotions, you may make decisions that hurt yourself or others, damage relationships, develop physical illnesses, and make you feel unhappy about your life.
- When you experience stress and anger on top of another emotion, the original emotion is magnified and can feel more difficult to manage.
- Alcohol and other drugs increase the odds that you won't think clearly.
- A healthy emotional response to a trigger generates the appropriate level of emotion for the situation, balances feeling with thinking, and results in decisions that help you work more effectively toward what is important for you.

## Tips for Dealing with Stress

- Don't worry about things you can't control, like the weather.
- Prepare to the best of your ability for events you know may be stressful, like a job interview.
- Try to look at change as a positive challenge, not a threat.
- Work to resolve conflicts with other people.
- Ask for help from friends, family or professionals.
- Set realistic goals at home and at work.
- Exercise on a regular basis.
- Eat well-balanced meals and get enough sleep.
- Get away from your daily stresses with group sports, social events and hobbies.

### Stress Management Techniques:

Activity	Healthy	Unhealthy	Both
<i>Guided Imagery</i>	√		

### What helps you to reduce stress?

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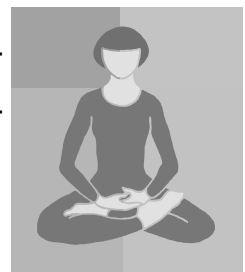
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# Mental Health Unit Review

1. What types of feelings and behaviors could indicate warning signs of a mental health problem?
2. How are mental disorders similar to other disorders like heart disease or diabetes?
3. Select one mental disorder, include symptoms and statistics.
4. How are Anorexia Nervosa and Bulimia Nervosa both similar and different?
5. How are eustress and distress different? Provide examples.
6. Describe the fight or flight process.
7. Describe three stress management techniques or stress reduction activities.
8. How does time management help with stress?
9. List 3 resources at school for mental health issues.

# Communicable and Non-communicable Diseases

**Disease** is defined as an incorrect functioning of an organ, part, structure, or system of the body.

## Communicable diseases:

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## Noncommunicable diseases:

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## Six areas from which disease results

1. **Infection**- caused by an agent capable of reproducing in the body  
ONLY AREA WHICH IS CONSIDERED COMMUNICABLE  
Examples: cold, influenza, STDs, AIDS, Lyme disease, etc.
2. **Heredity**- genetically passed  
Predisposition- more likely to get disease if it runs in your family than if you have no family history.  
Examples: cardiovascular disease, cancer, hemophilia, etc.
3. **Diet**- daily pattern of eating habits  
Examples: anemia, vitamin deficiency diseases, cardiovascular disease, etc.
4. **Stress**- physical and emotional complications  
Examples: headaches, ulcers, cardiovascular diseases, etc.
5. **Environment**- surroundings in which you live and work, including  
Pollution, accidents, smoking, work conditions, etc. can all cause these illnesses  
Examples: black lung disease, cancer, emphysema, mesothelioma, etc.
6. **Degenerative Process**- as the body ages, parts do wear out over time  
Examples: cardiovascular disease, osteoporosis, senility, vision/hearing loss, etc.

\*\*\*MOST DISEASES RESULT AS A COMBINATION OF AREAS\*\*\*

# Leading Causes of Death in the U.S. 2013

1. Diseases of the heart (Heart Disease)
2. Malignant tumors (Cancers)
3. Chronic lower respiratory diseases
4. Accidents (unintentional injuries)
5. Cerebrovascular diseases (Strokes)
6. Alzheimer's disease
7. Diabetes mellitus
8. Influenza and pneumonia
9. Nephritis, nephrotic syndrome, and nephrosis (kidney)
10. Suicide

In 2012, 2,513,171 people died. The average life expectancy for American men was 76.3. The average life expectancy for American women was 81.1. Overall life expectancy at birth for the U.S. population was 78.7 years.

During the early 1900s life expectancy was approximately 47 years of age at birth. In 1900, 30.4% of all deaths occurred among children aged less than 5 years; in 1997, that percentage was only 1.4%. In 1900, the three leading causes of death were pneumonia, tuberculosis (TB), and diarrhea and enteritis, which (together with diphtheria) caused one third of all deaths.

- How would you categorize the majority of the leading causes of death for 2013? Why?
- Only since the 1900s have non-communicable diseases become the leading cause of death. Why?

Reasons for reduction of Communicable Diseases	Reasons for increase of Non Communicable Diseases

All of these factors add up to...

\_\_\_\_\_ + \_\_\_\_\_ = Non Communicable Disease



# Communicable Diseases

A. **Communicable Diseases** – diseases that can be transmitted from person to person, object to person, or animal/insect to person which are caused by pathogens (microorganisms that cause disease; aka germs)

## B. Types of Pathogens

1. **Bacteria:** \_\_\_\_\_
2. **Virus:** \_\_\_\_\_
3. **Protozoa:** \_\_\_\_\_
4. **Fungi:** \_\_\_\_\_
5. **Rickettsia:** live in animals (lice, fleas, ticks, and mites) and attack blood vessels; example: Rocky Mountain Spotted Fever
6. **Parasitic Worms:** usually infect intestines; examples: tapeworm, trichinosis
7. **Prions:** a protein particle that lacks nucleic acid and has been implicated as the cause of various neurodegenerative diseases (as scrapie, Creutzfeldt-Jakob disease, and bovine spongiform encephalopathy)

## C. Method of Transmission

1. **Direct Contact:** \_\_\_\_\_
2. **Indirect Contact:** transmission of a pathogen occurs, but no contact will have been made between the host and the new vector
  - a. **Contaminated Object :** \_\_\_\_\_
  - b. **Vector:** \_\_\_\_\_
  - c. **Water or Food:** \_\_\_\_\_
3. **Airborne Transmission:** \_\_\_\_\_

## D. Types of Infection

1. **Local** – an infection that is located in one area of the body
2. **Generalized** – an infection throughout the body

## E. Length of Infection

1. **Acute** – infection lasting a short period of time
2. **Chronic** – infection that stays in the host throughout a lifetime

## F. Body Defenses

1. **Skin:** this organ is the body's best outer defense; unbroken skin helps to keep fluids, blood borne pathogens, and chemicals from entering the body; very few pathogens can penetrate the many layers of dead or living skin cells; it also produces various oils and acids which help to keep the skin healthy and free from unwanted bacteria
2. **Coughing/Sneezing:** these defenses help the body to remove existing contaminants (examples: dust particles, pollen, etc.)
3. **Mucus:** a sticky substance which traps pathogens

4. **Cilia:** tiny, hair like structures found in the nasal cavity, pharynx (throat) and trachea (windpipe) which trap viruses and bacteria
5. **Stomach Acid:** while this aids in digestion, it also helps to destroy any pathogens that make it past the body's mucous membranes and/or cilia
6. **Eyelashes/Eyelids:** help to keep pathogens from entering the eyes
7. **Tears, Saliva, and Perspiration:** each of these body fluids contain enzymes which help dissolve bacteria; tears also wash pathogens from the eyes
8. **Lymphatic System:** lymph nodes in the body produce lymph which filters bacteria; lymph nodes are found in the neck, groin, and armpits
9. **Antibodies:** proteins that are developed by the immune system when the body encounters a pathogen; they help fight off infection and remain in the body after the body has recovered
10. **Immunity:** resistance to the development of particular diseases.

**Terms to know:**

1. **Pandemic:** occurring over a wide geographic area and affecting an exceptionally high proportion of the population <pandemic influenza>
2. **Epidemic:** affecting or tending to affect an atypically large number of individuals within a population, community, or region at the same time
3. **Endemic:** restricted or peculiar to a locality or region

**G. Building Your Immune System/ Preventing Disease**

1. Wash your hands
2. Immunizations
3. Proper food storage and preparation
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_



# The Immune Response

This is how the body fights infection. It is a bit complicated, but here is a simplified view of how it works.

1. Pathogens enter the body. They are immediately attacked by scavenger white blood cells—macrophages, monocytes or neutrophils.
2. The macrophage (WBC) engulfs the pathogen and grinds it up. It displays pieces of the pathogen called markers (or antigens) on the outside of itself. These help other white blood cells called lymphocytes to identify the pathogen.
  - a. T cells or T-lymphocytes are made in the thymus gland.
  - b. B cells or B-lymphocytes are made in the bone marrow.
3. Helper T cells bond with the antigen on the macrophage. These cells alert and activate B cells which change into Plasma cells. Plasma cells produce antibodies (proteins) to stop new pathogens of the same type or make them more vulnerable to scavenger white blood cells.
4. Killer T-lymphocytes attack virus infected cells and fire proteins, called interferon, that destroy the infected cell.
5. Suppressor T-lymphocytes circulate through the body after the infection has been eliminated, to slow and stop the process.
6. Memory cells (a type of plasma cell) circulate through the body after infection, ready for any new invasion by the same pathogen.



## Immunizations

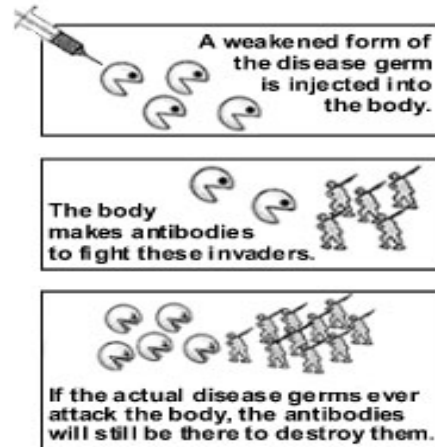
**Immunizations or vaccinations are preparations given to a person to trigger the immune response.**

They usually consist of dead or attenuated (weakened) pathogens which will not produce an episode of the disease, but prompt the body into making antibodies.

All children in the United States must be immunized in order to attend school. Immunizations are quite effective, as evidenced by the eradication of smallpox from the world.

# How Vaccines Prevent Disease

Parents are constantly concerned about the health and safety of their children and they take many steps to protect them. These preventive measures range from child-proof door latches to child safety seats. In the same respect, vaccines work to safeguard children from illnesses and death caused by infectious diseases. Vaccines protect children by helping prepare their bodies to fight often serious, and potentially, deadly diseases.



## New York State Recommended Childhood and Adolescent Immunization Schedule

A check ✓ means that this is the earliest and best time for your child to be immunized. If your child misses the "best time" for vaccination, he or she should still be immunized as quickly as possible. Ask your doctor about getting your child caught up.

Vaccine against:	Birth	2 months	4 months	6 months	12 months	15 months	18-23 months	4-6 years	11-12 years	16 years	
Hepatitis B	✓	✓ 1-2 mo.		✓ 6-18 mo.							
Rotavirus		✓	✓	✓ <sup>1</sup>							
Diphtheria, Tetanus, Pertussis (DTaP)		✓	✓	✓		✓ 15-18 mo.		✓			
Tetanus, Diphtheria, Pertussis (Tdap) <sup>2</sup>									✓ <sup>2</sup>		
Haemophilus influenzae type b (Hib)		✓	✓	✓ <sup>1</sup>	✓ 12-15 mo.						
Pneumococcal Disease (PCV) <sup>3</sup>		✓	✓	✓	✓ 12-15 mo.		Ask your doctor if your child 2 years old or older should get vaccinated with PPSV23. <sup>3</sup>				
Polio (IPV)		✓	✓	✓ 6-18 mo.				✓			
Influenza				Recommended yearly for all children aged 6 months and older. Ask your doctor if your child should receive one or two doses.							
Measles, Mumps, Rubella (MMR) <sup>4</sup>				See footnote 4	✓ 12-15 mo.			✓			
Varicella (Chickenpox)					✓ 12-15 mo.			✓			
Hepatitis A					✓		✓				
Human Papillomavirus (HPV) <sup>5</sup>									✓ <sup>5</sup>		
Meningococcal Disease <sup>6</sup>		Ask your doctor if your child 2 months old or older should get vaccinated against meningococcal disease.							✓		✓

**1. Based on the chart and information above, explain why immunizations are so important to individuals and society.**

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**2. How do vaccines work? What are people getting injected into their body?**

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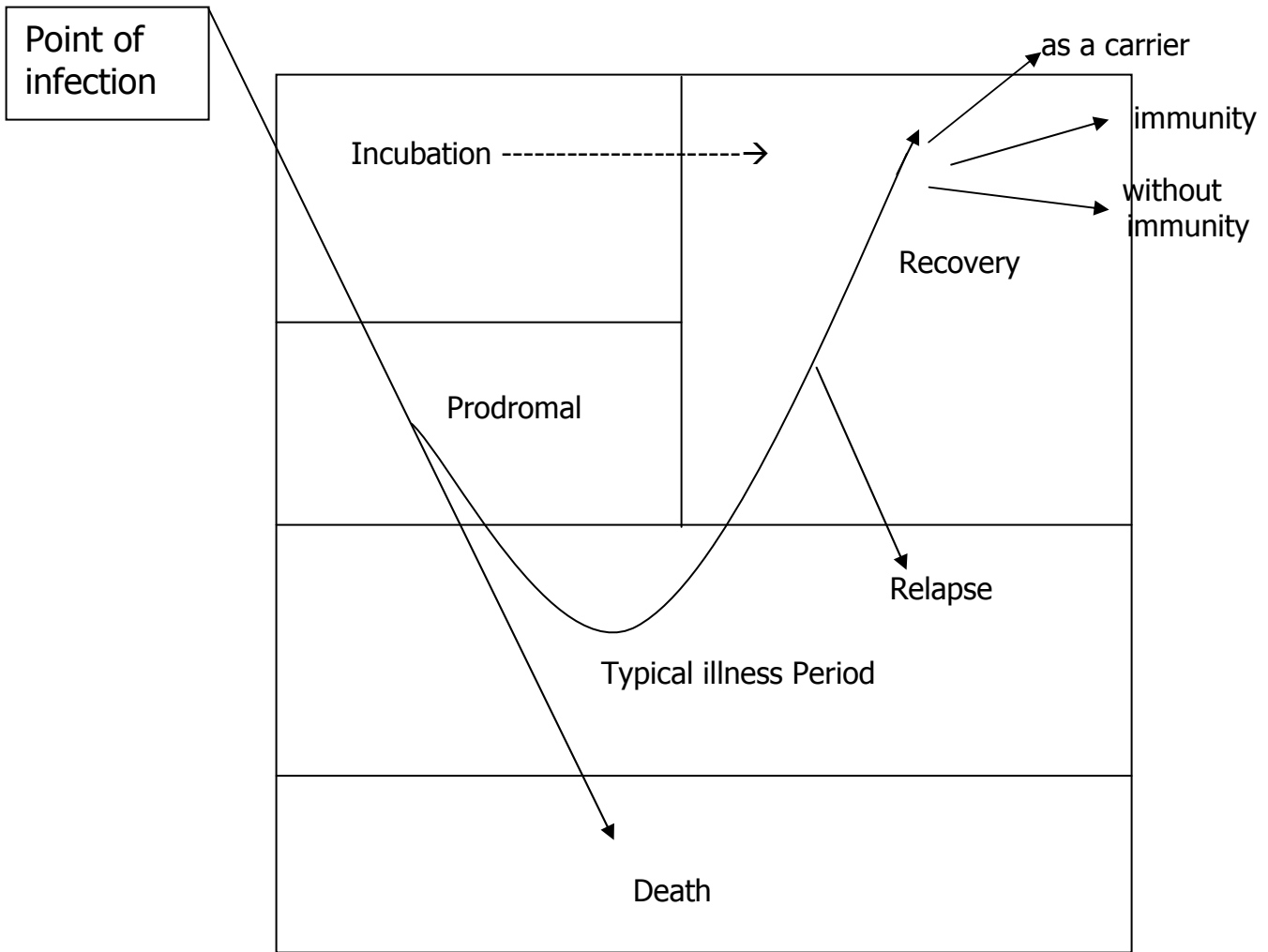


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# Communicable Disease Progression Diagram



- **Point of Infection:** \_\_\_\_\_
- **Incubation:** \_\_\_\_\_
- **Prodromal:** \_\_\_\_\_
- **Typical Illness:** \_\_\_\_\_
- **Recovery:** \_\_\_\_\_
- **Relapse:** \_\_\_\_\_
- **Death:** \_\_\_\_\_

**You can recover:**

- With immunity
- Without immunity
- As a carrier

# Lyme Disease

Lyme disease is caused by bacteria transmitted by the deer tick. Lyme disease may cause symptoms affecting the skin, nervous system, heart and/or joints of an individual. It is very commonly found on Long Island.

**Early symptoms:** in 60 to 80% of cases, a rash resembling a bull's eye or solid patch appears and expands around or near the site of the tick bite. Some may experience chills and fever, headache, fatigue, stiff neck, muscle and/or joint pain, swollen glands.

**Later symptoms:** As the disease progresses, severe fatigue, stiff aching neck and tingling or numbness in the arms and legs, facial paralysis may occur. The most severe symptoms can include severe headaches, painful arthritis, and swelling of the joints, heart and central nervous system problems.

**Treatment:** Early treatment of Lyme disease involves antibiotics and almost always results in a full cure. However, the chances of a complete cure decrease if treatment is delayed.

**Prevention:** Prevent tick bites by wearing light-colored clothing and tucking pants into socks and shirt into pants. Use a tick repellent containing DEET. Check for ticks after 2 or 3 hours of outdoor activity. Remove all ticks using tweezers.

## Answer the following questions:

1. Lyme Disease is caused by \_\_\_\_\_ transmitted by the \_\_\_\_\_ tick

2. List three early symptoms of Lyme Disease

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

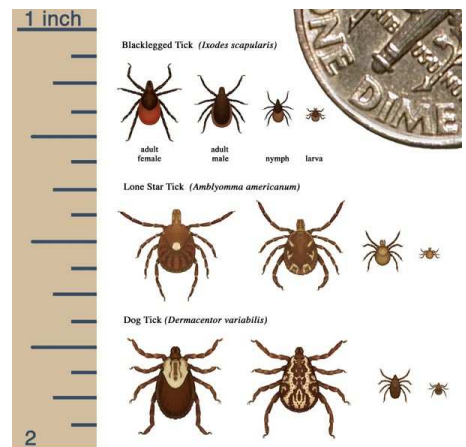
3. List three late symptoms of Lyme Disease

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

4. Early treatment of Lyme disease involves \_\_\_\_\_ and almost always results in a full \_\_\_\_\_.

5. There are several ways one can reduce their exposure to Lyme disease, List 3 preventive methods below

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



# West Nile Virus

West Nile Virus is a mosquito-borne infection that can cause serious illness, and in some cases, death. It is quite common on Long Island at this time. Most people who are infected with the virus will not have any type of illness.

**Mild symptoms:** fever, headache, body aches, occasional skin rash and swollen lymph glands. About 20% of the people infected develop these symptoms.

**Severe symptoms:** headache, high fever, neck stiffness, muscle weakness, stupor, disorientation, tremors, convulsions, paralysis, and coma. One person out of 150 infected will develop these symptoms.

**Treatment:** There is no specific treatment for viral infections, other than to treat the symptoms and provide supportive care.

**Prevention:** Wear shoes, socks, long pants and long-sleeved shirts when outside for long periods of time or when mosquitoes are most active and use mosquito repellent according to directions. Prevent mosquitoes from breeding by eliminating any standing water in your yard, make sure gutters drain properly, and change water in birdbaths twice weekly.

## Answer the following questions:

1. What is West Nile Virus?

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2. List three mild symptoms of West Nile Virus

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

3. List three severe symptoms of West Nile Virus

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

4. There is \_\_\_\_\_ specific treatment for viral infections, other than to treat the \_\_\_\_\_ and provide \_\_\_\_\_.

5. Prevent mosquitoes from breeding by

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



# What is Foodborne Disease?

Foodborne disease is caused by consuming contaminated foods or beverages. Many different disease-causing microbes, or pathogens, can contaminate foods, so there are many different foodborne infections. In addition, poisonous chemicals, or other harmful substances can cause foodborne diseases if they are present in food.

## What are the most common foodborne diseases?

The most commonly recognized foodborne infections are those caused by the bacteria *Campylobacter*, *Salmonella*, and *E. coli* O157:H7, and by a group of viruses called calicivirus, also known as the Norwalk and Norwalk-like viruses.

**Campylobacter** is a bacterial pathogen that causes fever, diarrhea, and abdominal cramps. It is the most commonly identified bacterial cause of diarrheal illness in the world. These bacteria live in the intestines of healthy birds, and most raw poultry meat has *Campylobacter* on it. Eating undercooked chicken or other food that has been contaminated with juices dripping from raw chicken is the most frequent source of this infection.

**Salmonella** is also a bacterium that is widespread in the intestines of birds, reptiles and mammals. It can spread to humans via a variety of different foods of animal origin. The illness it causes, salmonellosis, typically includes fever, diarrhea and abdominal cramps. In persons with poor underlying health or weakened immune systems, it can invade the bloodstream and cause life-threatening infections.

**E. coli** O157:H7 is a bacterial pathogen that has a reservoir in cattle and other similar animals. Human illness typically follows consumption of food or water that has been contaminated with microscopic amounts of cow feces. The illness it causes is often a severe and bloody diarrhea and painful abdominal cramps, without much fever

**Calicivirus**, or Norwalk-like virus is an extremely common cause of foodborne illness. It causes an acute gastrointestinal illness, usually with more vomiting than diarrhea that resolves within two days. Norwalk-like viruses spread primarily from one infected person to another. Infected kitchen workers can contaminate a salad or sandwich as they prepare it if they have the virus on their hands.

Some common diseases are occasionally foodborne, even though they are usually transmitted by other routes. These include infections caused by *Shigella*, hepatitis A, and the parasites *Giardia lamblia* and *Cryptosporidia*. Even strep throats have been transmitted occasionally through food.

**1. Name the four most commonly recognized foodborne infections.**

**2. List some of the symptoms of food-borne illness:**

**3. How would you prevent the spreading illness through food?**



## Sexually Transmitted Infections

<b>STD/STI</b>	<b>Pathogen</b>	<b>Symptoms</b>	<b>Diagnosis</b>	<b>Treat-able</b>	<b>Therapy</b>	<b>Result if left untreated</b>
Chlamydia	Bacteria	Men: pain and burning when urinating, discharge Women: Often no symptoms	Lab exam of fluid from infected area	Yes	Antibiotic pills that kill bacteria	Pelvic infections PID sterility (can't have children)
Gonorrhea	Bacteria	Men: pain and burning when urinating, discharge Women: Often no symptoms	Lab exam of fluid from infected area	Yes	Antibiotic pills that kill bacteria	Pelvic Infections PID Sterility
Syphilis	Bacteria	Chancre sore, rash, hair loss, etc.	Lab exam of tissue, fluids/ blood test	Yes	Penicillin shots to kill bacteria	Blindness Heart Disease Brain Damage
Genital Herpes (HSV)	virus	Painful lesions or blisters in genital area	Lab exam of fluid from sore	Yes, but can't be cured	Pills and ointment	Prolonged and more severe symptoms
Genital Warts (HPV)	virus	Bumpy warts on/near genitals (some are microscopic)	Visual	Yes, but can't be cured	Burning or liquid removal of warts	May lead to cancers
Cytomegalovirus (CMV)	virus	No symptoms; or fever; or severe illness in people with damaged immune systems.	Lab exam of fluids or skin; blood test	No	Antiviral medicine	People with immune damage- severe mononucleosis, blindness, dangerous blood disorders, lung damage
Hepatitis B	virus	nausea, vomiting, stomach pain, yellow skin (jaundice)	Blood tests	Yes, but can't be cured	Pills, shots to treat symptoms / complications, not disease	Liver Damage
HIV disease (AIDS- Acquired immune deficiency syndrome)	virus	Varies with stage of disease , but common symptoms are persistent & unexplainable cough, diarrhea, fatigue, weight loss, fever	Blood Tests	Yes, but can't be cured	Drugs (Pills) that slow progress of virus, drugs that fight infection	Dangerous Infections, disease progresses faster
Pubic Lice (crabs)	parasitic insects	Severe itching, you can see the parasites	Visual	Yes	Over the counter or prescription lotion	Continuing symptoms
Trichomoniasis	protozoan parasite	Itching in/around vagina, strawberry colored rash	Lab exam of fluids, urine test	Yes	Pills	Men- prostate damage Women- continuing symptoms

Suffolk County Health Centers  
STI Hotline: 631-439-1551

AIDS Hotline: 1-800-342-AIDS

## STI Questions

Please use the chart from the previous page to answer the following questions

1. List two bacterial STIs which have the similar symptoms
  - \_\_\_\_\_
  - \_\_\_\_\_
2. Which viral STI may lead to an increased risk of cervical cancer?  
\_\_\_\_\_
3. Which STI manifests itself with a painless sore called a **chancre** during its first stage? \_\_\_\_\_
4. Which STI is characterized by **painful** blister-like sores in the genital region?  
\_\_\_\_\_
5. Which STIs are caused by parasites?
  - \_\_\_\_\_
  - \_\_\_\_\_
6. All bacterial diseases have one distinct advantage over viral STIs. Explain why it would be easier to deal with a bacterial STI.  
\_\_\_\_\_  
\_\_\_\_\_
7. Which sexually transmitted infections often shows no symptoms in women but often causes pain during urination in men?
  - \_\_\_\_\_
  - \_\_\_\_\_

# AIDS-Acquired Immune Deficiency Syndrome

## HIV-Human Immunodeficiency Virus

HIV+ means the person is infected with the virus; may be asymptomatic or do not yet meet the requirements for having AIDS.

AIDS means the person has had an opportunistic infection or has T-lymphocyte count under 200/cubic milliliter of blood and is HIV+.

### **Signs and Symptoms:**

HIV is a disease process. People move back and forth along the spectrum.

Early stage may exhibit flu-like symptoms.

Later, may experience night sweats, rapid weight loss, recurring viral infections, swollen glands.

Full-blown AIDS- T-cell count drops below 200 &/or **opportunistic infections** occur:

- PCP (pneumocystis carinii pneumonia)
- Candida albicans (fungal infection)
- Toxoplasmosis (parasitic infection of brain)
- CMV (cytomegalovirus)
- Kaposi's sarcoma (rare skin cancer)
- Tuberculosis (infection of lungs)

### **Transmission:**

HIV is carried through body fluids, and may be transmitted during intercourse, sharing drug injection equipment, infected blood products, or maternal transmission (30 % risk, which can be reduced by antiviral drugs and c-section). The four body fluids, which for the "average person" pose a risk of contracting HIV:

- Blood
- Semen
- Vaginal secretions
- Breast milk

\*\*There have been no reported cases of HIV infection through mosquito bites or human tears.

### **Treatment:**

- **HAART:** Highly Active Antiretroviral Therapy (AIDS cocktail)
- Disrupts the HIV at different stages of replication, can drop viral load to undetectable levels
- Drawbacks include: false sense of being well or cured, diabetes, huge expense, rigorous dosing schedule, resistant strains of HIV, weight redistribution, drug interaction
- Health foods, vitamins, alternative healing, support groups.
- People are living longer and staying healthier longer.

**No cure and no vaccine at this time, but has become for many people a chronic, manageable disease.**

# HIV and AIDS Questions

1. A person diagnosed with HIV is defined as \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. There are 2 reasons why someone would move from HIV+ to AIDS status. List both reasons. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. List four ***opportunistic infections***.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. HIV is transmitted through the exchange of body fluids. What 4 body fluids transmit the infection? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. HAART stands for \_\_\_\_\_  
\_\_\_\_\_

## **True/False**

- \_\_\_\_\_ 6. Human Immunodeficiency Virus is often spread by heterosexual intercourse.
- \_\_\_\_\_ 7. You can get AIDS from a mosquito bite.
- \_\_\_\_\_ 8. There is a cure for AIDS today.
- \_\_\_\_\_ 9. People do not die of AIDS, but rather, opportunistic infections.
- \_\_\_\_\_ 10. All pregnant mothers with HIV or AIDS will transmit the virus to their fetus.

## Non-communicable Diseases

**Arthritis:** painful inflammation and swelling of joints – There are many different types and it may be caused by heredity, degeneration or injury to the joint(s). Arthritis can be treated with aspirin and other anti-inflammatory medications but there is no cure.

**Alzheimer's disease (AD)** is the most common form of [dementia](#) among older people. Dementia is a brain disorder that seriously affects a person's ability to carry out daily activities. AD begins slowly. It first involves the parts of the brain that control thought, memory and language. People with AD may have trouble remembering things that happened recently or names of people they know. Over time, symptoms get worse. People may not recognize family members or have trouble speaking, reading or writing. They may forget how to brush their teeth or comb their hair. Later on, they may become anxious or aggressive, or wander away from home. Eventually, they need total care. This can cause great stress for family members who must [care](#) for them. AD usually begins after age 60. The risk goes up as you get older. Your risk is also higher if a family member has had the disease. No treatment can stop the disease. However, some drugs may help keep symptoms from getting worse for a limited time.

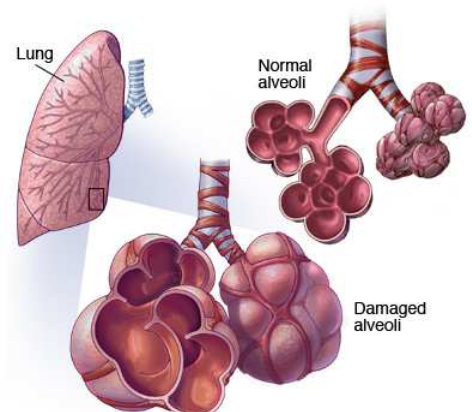
**Asthma:** periods of difficult breathing, or inability to breathe – Swelling of mucus membranes lining bronchial tubes, blocking airway. Asthma is often related to allergies, physical exertion, or anxiety. It may develop or come to an end during one's lifetime. Treatments include medications, inhalers, and avoiding allergy irritants.

### Chronic Obstructive Pulmonary Disease (COPD)

COPD makes it hard for you to breathe. Coughing up mucus is often the first sign of COPD. Chronic bronchitis and emphysema are common COPDs. Cigarette smoking is the most common cause of COPD. Breathing in other kinds of irritants, like pollution, dust or chemicals, may also cause or contribute to COPD. Quitting smoking is the best way to avoid developing COPD.

**Chronic Bronchitis:** recurring irritation of lungs – Bronchitis results from irritating mucus membranes, which then produce excess mucus or phlegm. This blocks the air passages, causing heavy coughing. Smoking is a major cause of chronic bronchitis. Other causes include a lack of treatment for influenza or a common cold.

**Emphysema:** gradual deterioration of the lungs caused by smoking; alveoli lose elasticity and may tear, resulting in a loss of lung capacity – Inhaled particles collect along walls of alveoli and harden over time. The main symptom is difficult breathing, especially while exhaling, even with no physical exertion. Treatments include mild exercise, medication, breathing exercises, and oxygen tanks. There is no cure.



# Cancer

- A. One of the leading causes of death in the U.S.
- B. More people could be saved through **early detection**.
- Don't allow fear to keep from medical help
  - Regular health exams – self exams (breast and testicular), mammography (x-ray to detect tumors in the breasts), prostate exam, colonoscopy, etc.
  - Be aware of the **Seven Early Warning Signs**:  
**C:** \_\_\_\_\_  
**A:** \_\_\_\_\_  
**U:** \_\_\_\_\_  
**T:** \_\_\_\_\_  
**I:** \_\_\_\_\_  
**O:** \_\_\_\_\_  
**N:** \_\_\_\_\_
- C. **Definition: Cancer** is the abnormal and uncontrolled growth and spread of your own body cells – cells no longer function properly.
- D. **Tumors** – swelling or mass formed when cells that normally cooperate in performing a useful function no longer cooperate; cells begin to multiply rapidly and independently, taking nourishment from normal and healthy cells.
- **Benign:** \_\_\_\_\_
  - **Malignant:** \_\_\_\_\_
  - **Metastasize:** \_\_\_\_\_
- E. **Cure for Cancer:** removal of every single malignant cell
- F. **Diagnosis:** how a person determines whether they have a specific condition or not
- Methods used for diagnosis include:  
**MRI:** a procedure in which magnetic resonance imaging is used; it produces shadowed images  
**Blood test:** sample of blood is taken and its characteristics and properties are analyzed  
**Pap smear:** extracting and analyzing cells from the cervix  
**Prostate/rectal exam:** examination of the prostate and rectum for malignant cells; an enlarged prostate is often a sign of cancer  
**CAT scan:** painless and noninvasive; a sectional view of the body constructed by computed tomography -- called also CT scan  
**Biopsy:** a sample of living tissue which is tested for malignant cells  
**PET scan:** an image obtained by positron emission tomography



## Treatment Options

- **Chemotherapy** – treatment with chemical agents; these chemicals impair the ability of cancer cells to replicate and are often used in conjunction with radiation treatment
- **Radiation** – treatment using x-rays or gamma rays to stop malignant cells from reproducing
- **Surgery** – treatment by operating and removing tissue from affected area
- **Interferon** – drugs that stimulate the immune system to fight cancer
- **Hormone therapy** – used in some cases to prevent the reoccurrence of cancer
- Other treatment options are also available and differ based on the type of cancer

## G. Causes

- **Environment** – chemicals/pollutants in water, air, etc.
- **Heredity/Genetics** – development of many conditions is linked to family history
- **Lifestyle behaviors** – diet, exercise, use of substances, stress, etc. may increase or decrease the chance of developing cancer or other conditions
  - **carcinogen** – cancer causing agent, found in the following:

asbestos	radiation	tobacco	petroleum products
UV rays	toxic wastes	chemicals	saccharine

## J. Types of cancer

- **Lymphoma** – cancer of the lymphatic system, including the lymph nodes
- **Melanoma** – deadly form of skin cancer, can spread to other areas of body
- **Sarcoma** – cancer in soft tissues, including cartilage, muscle, and fat, as well as in the bones
- **Carcinoma** – tumors that are firm and irregular, usually develop in the skin, large intestine, stomach, lungs, prostate, cervix, or breast
- **Leukemia** – cancer of blood forming tissues including bone marrow and the lymphatic system

**Fill in the blanks in the following paragraph.**

**Word bank: chemotherapy, radiation, mammogram, biopsy, tumor, cancer, metastasis.**

Mrs. Phillips felt an unusual lump in her breast. She called her radiologist and made an appointment for a \_\_\_\_\_. After her visit, Dr. Castro called and said it was a \_\_\_\_\_, a swelling or mass, and that she should have a \_\_\_\_\_ done to properly diagnosis a possible condition. Examination of the cells indicated that the lump was \_\_\_\_\_. The doctor was encouraged because there was no \_\_\_\_\_, meaning the cancer did not spread. Treatment included \_\_\_\_\_, which is the use of chemical agents, and \_\_\_\_\_ to stop malignant cells from reproducing. Today, Mrs. Phillips is feeling great.

# Skin Cancer

## I Skin cancer is the most common form of cancer in the United States.

The three major types of skin cancer are

- basal cell and squamous cell carcinomas ( highly curable)
- Malignant melanoma ( more serious)

## II Risk Factors for Skin Cancer

- Light skin color, hair color, or eye color.
- Family history of skin cancer.
- Personal history of skin cancer.
- Chronic exposure to the sun.
- History of sunburns early in life.
- Certain types of moles, or a large number of moles.
- Freckles, which indicate sun sensitivity and sun damage

## III What causes Skin Cancer?

- Exposure to the sun's ultraviolet (UV) rays appears to be the most important environmental factor involved in the development of skin cancer.
- UV rays from artificial sources of light, such as tanning beds and sunlamps, are as dangerous as those from the sun and should also be avoided.

## IV. The ABCDE's of Melanoma



A

**Asymmetry:** Most early melanomas are asymmetrical: a line through the middle would not create matching halves. Common moles are round and symmetrical.



B

**Border:** The borders of early melanomas are often uneven and may have scalloped or notched edges. Common moles have smoother, more even borders.



C

**Color:** Common moles usually are a single shade of brown. Varied shades of brown, tan, or black are often the first sign of melanoma. As melanomas progress, the colors red, white and blue may appear.



D

**Diameter:** Early melanomas tend to grow larger than common moles - generally to at least the size of a pencil eraser (about 6mm, or 1/4 inch, in diameter).

"E"...emerging / evolving



# Explaining Sunscreen and the New Rules

New York Times/June 20, 2011/ By Jane E. Brody

Attention, sun lovers (and yes, that includes all who think they are adequately protected against the sun's damaging rays): Nearly four years after announcing its intention to improve the labeling of sunscreens, the Food and Drug Administration has finally issued new rules that should help reduce the confusion that currently prevails when consumers confront the aisle-long array of products in most pharmacies.

But these rules will not take effect for another year (and for small manufacturers, two years). Meanwhile, everyone needs to know what to do now about preventing painful sunburns, disfiguring and deadly skin cancers and premature skin aging.

How high an SPF should one choose? Is SPF 60 really that much better than SPF 30? What does "broad spectrum" mean? Are all sunscreen ingredients equally effective? And equally safe?

And perhaps the most frightening question: Why has the incidence of melanoma, the deadliest of skin cancers, doubled since sunscreens (as opposed to tanning lotions) became popular?

No better time to get the answers to these questions than now, the week of the summer solstice. Even if it is not sunny where you are, the ultraviolet rays hitting your skin will be their most intense.

## **Rating Sunscreens**

First, some facts about sun and current sunscreen labels. There are two kinds of solar rays: short ones called UVB that cause burning and skin cancer and long ones called UVA that cause skin cancer and wrinkling. SPF ratings — the letters stand for sun protection factor — reflect only the extent of protection against UVB. The higher the rating, the longer one can stay in the sun before burning.

But there are two important caveats. First, SPF ratings are based on a rather thick application of sunscreen, not the amount consumers normally use, which is most often a quarter to a half the amount applied in manufacturers' tests. An adult in a bathing suit should apply about three tablespoons of lotion every two hours, experts say.

Second, above an SPF of 30, which can block 97 percent of UVB (if used in testing amounts), effectiveness increases by only 1 or 2 percent. In the way that sunscreens are used in the real world, then, a product with an SPF of 30 actually provides the protection of SPF 2.3 to 5.5, and one rated SPF 50 provides the protection of SPF 2.7 to 7.1, according to a report published this month in *Drug and Therapeutics Bulletin*.

UVA, which represents more than 95 percent of solar radiation reaching the earth, does not figure in SPF ratings. The phrase "broad spectrum" is meant to indicate protection against UVA, but there is no numerical rating for product effectiveness. Under the new rules, products labeled "broad spectrum" will have to provide equal protection against UVB and UVA, and only products with an SPF of 15 or higher will be allowed to claim protection against skin cancer and premature skin aging.

Meanwhile, dermatologists suggest choosing only products that are labeled "broad spectrum" and have an SPF rating of 30 to 50. There is no evidence that anything higher than 50 is any better. Apply the sunscreen just before exposure, and reapply it two hours later — it loses effectiveness over time. And even if the label claims the sunscreen is water resistant, be sure to reapply it after swimming or sweating heavily.

The rise in melanoma has led to fears that sunscreens may actually cause this deadly cancer. But other explanations are more likely. By allowing people to stay in the sun longer, sunscreens have greatly increased exposure to UVA radiation. And many, if not most, victims of melanoma were damaged long before sunscreens became popular. A history of sunburn is a major risk factor for this cancer; five sunburns per decade raise the risk by about threefold.

Another reason for the increase in diagnoses: skin cancer screening and detection have improved greatly in recent decades.

With regard to ingredients, many dermatologists recommend products with micronized titanium or zinc oxide as the most effective sun blockers that leave no white residue on the skin. There is some concern, based on animal studies that the most popular ingredient in sunscreens, oxybenzone, may disrupt natural hormones, but the scientific evidence is scant.

Another chemical, retinyl palmitate, sometimes listed among the inactive ingredients, has been linked to skin cancers in animal studies. Because it is converted into a compound that can cause birth defects, it should be avoided by women who are pregnant or likely to become pregnant. However, although more studies of these possible risks should be done, Consumer Reports concluded that "the proven benefits of sunscreen outweigh any potential risks."

Finally, don't be fooled by price. In tests of 22 sunscreens, Consumer Reports found nine to be effective against UVB and UVA and ranked three as "Best Buys": Up & Up Sport SPF spray (88 cents an ounce) at Target; No-Ad With Aloe and Vitamin E SPF 45 lotion (59 cents); and Equate Baby SPF 50 lotion (63 cents). The organization said La Roche-Posay Anthelios SPF 40 cream, at \$18.82 an ounce, scored well below these three in effectiveness.

Although it may be tempting to try to kill two birds at once with a combination sunscreen and insect repellent, the Centers for Disease Control and Prevention does not recommend this.

Multiple applications could result in an overdose of the repellent.

### **Seek Other Protection**

The best advice to prevent UV damage is to stay out of the midday sun altogether and to cover up with clothing, a hat and umbrella during the rest of the day even if it is cloudy. Clouds do not block damaging rays.

Keep in mind that ultraviolet radiation is reflected off sand and water, intensifying exposure even if you are protected by an umbrella from above.

Ordinary clothing provides a good sun shield when dry (the tighter the weave, the better) but little or no protection when wet. Special sun-protective clothing is costly but works well wet or dry; it is a wise investment for children who tend to stay in or around water for hours. Caps with a neck flap are especially helpful for sports enthusiasts. And no matter how well covered up you are, don't forget to apply sunscreen to your face, ears, neck and hands.

Also, keep in mind that some sun exposure is necessary to maintain a healthful level of vitamin D. Dermatologists suggest, for light-skinned people, that exposing one's hands, arms, face or back to non-burning doses of sunlight for 15 minutes two or three times a week from April to September should result in adequate vitamin D synthesis. Dark-skinned people need longer exposure.

1. What are the differences between UVA and UVB solar rays?
2. What does SPF stand for and how should one use sunscreen?
3. What is meant by "broad spectrum" suntan lotion?
4. What may explain the recent rise in melanoma?
5. Is it always safe to use a combination sunscreen and insect repellent?
6. What other ways (not sunscreen) can one protect their skin from sunburn, aging and cancer?

# Breast and Testicular Cancer

## **Testicular Self-exam**

Testicular cancer is most common in men ages 15 – 34; men should perform monthly testicular self-exams by the age of 15. The best time to perform the self-exam is during or after a bath or shower, when the skin of the scrotum is relaxed. To perform a testicular self exam:

- Hold the penis out of the way and examine each testicle separately.
- Hold the testicle between the thumbs and fingers with both hands and roll it gently between the fingers.
- Look and feel for any hard lumps or nodules (smooth rounded masses) or any change in the size, shape, or consistency of the testes.

You should be aware that each normal testis has an epididymis, which appears as a small "bump" on the upper or middle outer side of the testis. Normal testicles also contain blood vessels, supporting tissues, and tubes that conduct sperm. When you examine your testicles, you will become familiar with what is normal and what is different.

## **Breast Self-exam/Mammography**

Breast cancer rates on Long Island are higher than in other areas. Women should start practicing monthly breast self-exams by the age of 18 approximately one week into each menstrual cycle. Women should also have clinical breast exams beginning around the age of 18 - 20. Usually women get a baseline mammogram around the age of 35- 40. Mammograms are x-rays of the breast that are currently the most effective screening test for breast cancer.

## **The Five Steps of a Breast Self Exam**

**Step 1:** Begin by looking at your breasts in the mirror with your shoulders straight and your arms on your hips.

Here's what you should look for:

- Breasts that are their usual size, shape, and color.
- Breasts that are evenly shaped without visible distortion or swelling.

**Step 2:** Now, raise your arms and look for the same changes.

**Step 3:** While you're at the mirror, gently squeeze each nipple between your finger and thumb and check for nipple discharge (this could be a milky or yellow fluid or blood).

**Step 4:** Next, feel your breasts while lying down, using your right hand to feel your left breast and then your left hand to feel your right breast. Use a firm, smooth touch with the first few fingers. Follow a pattern to be sure that you cover the whole breast. You can begin at the nipple, moving in larger and larger circles until you reach the outer edge of the breast. You can also move your fingers up and down vertically, in rows, as if you were mowing a lawn. Be sure to feel all the breast tissue: just beneath your skin with a soft touch and down deeper with a firmer touch. Begin examining each area with a very soft touch, and then increase pressure so that you can feel the deeper tissue, down to your ribcage.

**Step 5:** Finally, feel your breasts while you are standing or sitting. Many women find that the easiest way to feel their breasts is when their skin is wet and slippery, so they like to do this step in the shower. Cover your entire breast, using the same hand movements described in Step 4.

# Cancer Review

1. What is the difference between a benign and malignant tumor?

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2. How are chemotherapy and radiation therapy different?

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3. List four tests that will help with the diagnosis of cancer.

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4. Define carcinogen and list six known carcinogens:

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5. What are the "A, B, C, D, E's" of melanoma:

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6. List three causes of cancer.

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7. List the seven warning signs of cancer.

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8. Why is it important to start either BSE or TSE during your teens?

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9. What are some ways to prevent or reduce your risk for cancer?

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# Cardiovascular Disease

## **What is cardiovascular disease?**

Cardiovascular disease is the name given to any disease that affects the heart or blood vessels by restricting the flow of blood. This occurs when plaque clogs the arteries, impeding the free flow of blood. Over time, the blood vessels become blocked and a heart attack or stroke can occur.

## **Important terms:**

1. **Angina Pectoris** – (Angina) pain that usually occurs in the chest, but may also occur in the arms, shoulders, or back; may be felt more when the heart beats fast, such as during exercise; may also be accompanied by weakness
2. **Coronary Artery Disease** (Atherosclerosis) – stage of arteriosclerosis when the deposits are made into the artery walls. **Plaque** – build-up of fat, cholesterol, and waste on the inner wall of a blood vessel
3. **Hypertension** – high blood pressure, which occurs when the pressure in the arteries is consistently higher than normal, indicating that the heart is working harder to pump blood through the circulatory system; symptoms may not appear until a major organ is damaged
4. **Congenital Heart Disease**- refers to a problem with the heart structure and function due to abnormal heart development before birth
5. **Heart Murmur** – a extra or unusual sound heard during a heartbeat. Most murmurs in children are caused by congenital heart defects. In adults abnormal heart murmurs most often are caused by acquired heart valve disease.
6. **Myocardial Infarction** – (heart attack) when the blood flow to part of the heart is blocked, usually by a blood clot (thrombus) or a piece of dislodged plaque; this part of the heart muscle may die without sufficient oxygen
7. **Stroke** – occurs when part of the brain does not receive enough blood and stops working due to a lack of oxygen

**Electrocardiograph** (EKG or ECG) – an instrument that records the electrical currents of the heart

**Angiogram** – an X-ray representation of blood vessels that is taken after the person is injected with dye so that the area of constriction can be found more easily

**Balloon Angioplasty** – procedure used to widen narrowed arteries; a deflated balloon is inserted by a catheter into the narrowed part of the artery and is then inflated to push the walls outward and allow the blood to flow more freely

**Stent** – a narrow device placed into the blood vessel for support in keeping the walls opened for blood flow

**Cardiac Bypass** – a surgical procedure in which blood vessels from other parts of the body are used to bypass diseased or damaged coronary arteries.

**Myocardium** – the tough, muscular wall of the heart

**Coronary Arteries/Vessels** – the arteries that supply cardiac muscle with blood

# Risk Factors for Developing Cardiovascular Disease

## I. You can control:

- **Smoking** – decreases oxygen to the heart and changes blood flow
- **Dietary Habits** – consumption of nutrient-deficient foods and trans fats, among other things, increase risk
- **Excess Alcohol** – can raise the levels of some fats in the blood, lead to high blood pressure, heart failure, and increased caloric intake (which could lead to obesity); can also lead to stroke
- **Stress** – can make the heart work harder and lead to high blood pressure
- **Sedentary Lifestyle** – lack of exercise may lead to excess body fat or higher levels of cholesterol, both of which result in the heart having to work harder than normal

## II. You have some control:

- **High Cholesterol** – the build-up of cholesterol reduces the amount of blood that makes it to the heart, meaning less oxygen and nutrients are getting to the heart
- **High Blood Pressure/Hypertension** – causes the heart to have to work harder; puts excess pressure on blood vessels
- **Obesity** – for some, genetics plays a role; for many obesity is a result of lifestyle choices
- **Diabetes** – people with diabetes often have high levels of cholesterol; also, excess glucose is destructive to the blood vessels and cholesterol is more easily deposited

## III. You cannot control:

- **Family History/Predisposition** – those people whose family members have had any sort of heart disease have a higher risk of developing a heart disease
- **Race** – African Americans are at the highest risk for developing coronary artery disease
- **Age** – people over the age of 65 are the most at risk for developing cardiovascular disease, though it often occurs much earlier
- **Gender** – men are more likely to develop cardiovascular disease than women

## What are some common symptoms of a heart attack?

- Pain
- Pressure or squeezing sensation in the center of the chest which may last more than a few minutes
- Pain radiating out to the shoulders, jaw, neck, or arms
- Discomfort in the chest accompanied by nausea, heartburn, sweating, fainting, or a feeling of lightheadedness
- Shortness of breath

# Cholesterol and Fats

## **Types of Fat**

**Essential Fatty Acids:** Types of fat that cannot be made in the body. We must eat foods rich in these as they are the building block for other important fatty acids (e.g., DHA/EPA).

**Lipid:** Scientific term referring to fat, cholesterol and other fat-like substances. A common quality among lipids is that they do not dissolve in water.

**Lipoprotein:** A protein-coated transporter that carries fat and/or cholesterol in the bloodstream.

**LDL: Low Density Lipoprotein** unhealthy cholesterol that contributes to cardiovascular disease.

**HDL: High Density Lipoprotein** healthy cholesterol helps clear the blood of LDLs. HDLs can be increased by healthy diet, exercise and not smoking.

**Triglycerides:** Scientific name for the main form of fat found in the diet and in the body. Most of the fat in the body is stored as triglycerides.

**Saturated Fats:** Usually solid at room temperature, saturated fats have all of the hydrogen atoms they can hold (saturated with hydrogen). Saturated fats primarily come from animal products, but are also found in tropical plant oils, such as coconut and palm.

**Monounsaturated Fats:** Liquid at room temperature, monounsaturated fats are missing one pair of hydrogen atoms. Monounsaturated fats primarily come from plants and include olive oil, canola oil and peanut oil.

**Polyunsaturated Fats:** Liquid at room temperature, polyunsaturated fats are missing two or more pairs of hydrogen atoms. Many common vegetable oils, such as corn, soybean, safflower and sunflower oil, are high in polyunsaturated fats.

**Hydrogenated Fats:** Unsaturated fats are sometimes processed to make them solid at room temperature and to protect against rancidity. Hydrogen atoms are added through a process called hydrogenation or partial hydrogenation

**Trans Fatty Acids:** A type of fat formed during the process of hydrogenation. Trans fatty acids have been shown to increase LDL cholesterol and lower HDL cholesterol, which may increase the risk for heart disease.

**Omega-3 Fatty Acids:** A type of fatty acid that is highly polyunsaturated. Omega-3 fatty acids are mainly found in higher-fat, cold-water fish, such as salmon, mackerel and herring as well as omega-3 fortified eggs. Diets high in omega-3 fatty acids may help lower levels of LDL cholesterol and triglycerides.

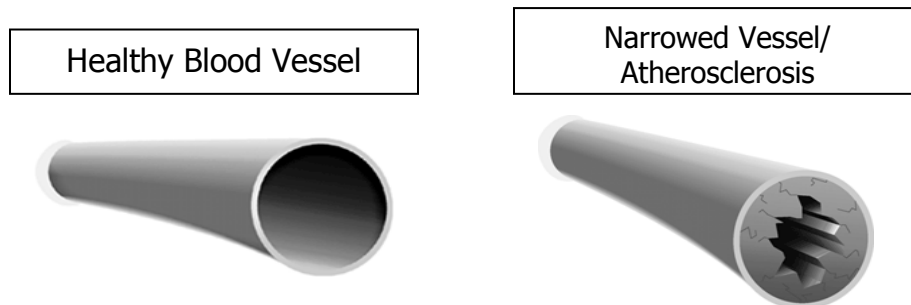
## Cholesterol and Fats (continued)

- Approximately one in every six adults—16.3% of the U.S. adult population—has high cholesterol. The level defined as high total cholesterol is 240 mg/dL and above. People with high cholesterol have approximately twice the risk for heart disease as people with lower levels.
- If you have heart disease, lowering your cholesterol can reduce your risk for having a heart attack, needing heart bypass surgery or angioplasty, and dying from heart disease. Even if you do not have heart disease, you can reduce your risk of developing it by lowering your cholesterol. This is true even if you have normal cholesterol levels.
- There are steps you can take to prevent high cholesterol or to reduce your levels. These actions include exercising, eating a healthy diet, and not smoking.
- High cholesterol does not have symptoms. Doctors can do a simple blood test to check your levels. It is recommended that adults get their cholesterol checked every five years.

<b>Desirable Cholesterol Levels</b>	
Total cholesterol	Less than 200 mg/dL
LDL ("bad" cholesterol)	Less than 100 mg/dL*
HDL ("good" cholesterol)	60 mg/dL or higher
Triglycerides	Less than 150 mg/dL

\*Optimal for people at risk for heart disease.

**What is cholesterol and where do we get cholesterol?** Cholesterol is a waxy, fat-like substance found in all animals including people. It is an essential part of cells in the body and is used to make certain hormones and digest fats. But, when you have too much in your blood, it can build up on the walls of your arteries. This can lead to heart disease and stroke. Our bodies can make all of our cholesterol, but most people also get it from foods. Different foods vary in the amount of cholesterol they contain. Only animal products have cholesterol; plants do not.



**Is eating fat unhealthy?** Eating some fat is necessary. It is an important source of essential fatty acids and concentrated energy — it has more than twice as many calories per ounce as sugar, starch or protein. Fats help carry fat-soluble vitamins A, D,



E and K. Yet, eating too much fat may lead to obesity, which is unhealthy. It also may increase the risk of heart disease and some forms of cancer.

**What about fish and fish oil supplements?** Diets high in fish, especially cold-water fish like salmon, herring, mackerel, and whitefish, have been linked to reduced risk of heart disease. People who eat large amounts of fish tend to have lower blood cholesterol and triglyceride levels. The high amounts of omega-3 fatty acids found in fish are believed to be the reason. The current recommendation is to consume a variety of fish (preferably oily) at least two times per week. The use of fish oil supplements could be considered with consultation with your doctor, especially in individuals with cardiovascular disease and elevated triglycerides.

There are several things you can do to reduce the amount of fat and cholesterol you eat:

**Eat more:**

- Vegetables, fruits, lean meats, fish, poultry
- Vegetable protein -- peas, lentils, beans, grains, nuts, seeds, soy
- Whole grains in breads, cereals, pasta and white grains

**Eat less:**

- Fried foods
- Fatty and processed meats -- lunch meats, bacon, hot dogs, sausage
- Desserts high in fat -- ice cream, pastries, pies, cheesecake

1. What does LDL stand for and is it harmful?
2. What does HDL stand for?
3. List three ways you can increase your HDLs
4. List three foods that are low in cholesterol
5. What are considered desirable blood cholesterol levels?
  - Total Cholesterol
  - LDL
  - HDL
  - Triglycerides
6. What are trans fatty acids and why are they harmful?
7. What are omega-3 fatty acids (include the food sources and benefits)?

# Hypertension/High Blood Pressure Facts

- Having high blood pressure puts you at risk for heart disease and stroke.
- High blood pressure usually has no warning signs or symptoms, so many people don't realize they have it.
- About one out of three U.S. adults has high blood pressure and about one in four American adults have prehypertension.

Blood pressure is written as two numbers. The first (systolic) number represents the pressure in your blood vessels when your heart beats. The second (diastolic) number represents the pressure in your vessels when your heart rests between beats.

## Blood Pressure Levels

Normal	systolic: less than 120 mmHg diastolic: less than 80mmHg
At risk (prehypertension)	systolic: 120–139 mmHg diastolic: 80–89 mmHg
High	systolic: 140 mmHg or higher diastolic: 90 mmHg or higher

## Stroke

Stroke is the fifth leading cause of death in the United States. A stroke occurs when a clot blocks the blood supply to the brain or when a blood vessel in the brain bursts. You can greatly reduce your risk for stroke through lifestyle changes and, in some cases, medication.

Stroke can cause death or significant disability, such as paralysis, speech difficulties, and emotional problems. Some new treatments can reduce stroke damage if patients get medical care soon after symptoms begin. When a stroke happens, it is important to recognize the symptoms, call 9-1-1 right away, and get to a hospital quickly.

## Symptoms of stroke are

- Sudden numbness or weakness of the face, arm or leg (especially on one side of the body)
- Sudden confusion, trouble speaking or understanding speech
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden severe headache with no known cause



**What should you do if someone experiences sudden numbness or weakness of the face arm or leg, especially if it is on one side of the body and /or has difficulty speaking?**

# What is Diabetes?

Diabetes is a disease in which blood glucose levels are above normal. Most of the food we eat is turned into glucose, or sugar, for our bodies to use for energy. The pancreas, an organ that lies near the stomach, makes a hormone called insulin to help glucose get into the cells of our bodies. When you have diabetes, your body either doesn't make enough insulin or can't use its own insulin as well as it should. This causes sugar to build up in your blood.

Diabetes can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations. Diabetes is in the top ten leading causes of death in the United States.

## What are the symptoms of diabetes?

People who think they might have diabetes must visit a physician for diagnosis. They might have SOME or NONE of the following symptoms:

- Frequent Urination
- Excessive thirst
- Unexplained weight loss
- Extreme hunger
- Sudden vision changes
- Tingling or numbness in hands or feet
- Very dry skin
- Sores that are slow to heal
- More infections than usual
- Feeling very tired much of the time

## What are the types of diabetes?

**Diabetes I:** which was previously called insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes, may account for 5% to 10% of all diagnosed cases of diabetes.

**Diabetes II:** which was previously called non-insulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes, may account for about 90% to 95% of all diagnosed cases of diabetes.

**Gestational Diabetes:** is a type of diabetes that only pregnant women get. If not treated, it can cause problems for mothers and babies. Gestational diabetes develops in 2% to 5% of all pregnancies but usually disappears when a pregnancy is over.

### What are the risk factors for diabetes?

Risk factors for type 2 diabetes include age, obesity, family history of diabetes, prior history of gestational diabetes, impaired glucose tolerance, physical inactivity and race/ethnicity.

Risk factors are less well defined for type 1 diabetes than for type 2 diabetes, but autoimmune, genetic, and environmental factors are involved in developing this type of diabetes.

Gestational diabetes occurs more frequently in African Americans, Hispanic/Latino Americans, American Indians, and people with a family history of diabetes than in other groups. Obesity is also associated with higher risk. Women who have had gestational diabetes are at increased risk for later developing type 2 diabetes. In some studies, nearly 40% of women with a history of gestational diabetes developed diabetes in the future.

### What is the treatment for diabetes?

Healthy eating, physical activity, and insulin injections are the basic therapies for type 1 diabetes. The amount of insulin taken must be balanced with food intake and daily activities. Blood glucose levels must be closely monitored through frequent blood glucose testing.

Healthy eating, physical activity, and blood glucose testing are the basic therapies for type 2 diabetes. In addition, many people with type 2 diabetes require oral medication, insulin, or both to control their blood glucose levels.

People with diabetes must take responsibility for their day-to-day care, and keep blood glucose levels from going too low or too high.

People with diabetes should see a health care provider who will monitor their diabetes control and help them learn to manage their diabetes. In addition, people with diabetes may see endocrinologists, who may specialize in diabetes care; ophthalmologists for eye examinations; podiatrists for routine foot care; and dietitians and diabetes educators who teach the skills needed for daily diabetes management.

### **Answer the following questions:**

1. What are the symptoms of diabetes? \_\_\_\_\_
2. List three long term complications of diabetes. \_\_\_\_\_
3. What are three risk factors for Type 2 diabetes? \_\_\_\_\_
4. Name three types of diabetes \_\_\_\_\_

## Non-Communicable Disease Review

1. Dr. Smith was concerned when Marty came to the office complaining about not being able to sleep well and was up several times per night urinating. Marty has been excessively thirsty for the past few months and lost weight even though he was not dieting. The physician might order a fasting blood glucose test or an Oral Glucose Tolerance Test (OGTT). Diabetes is a possible diagnosis.

A. What are possible long term complications for the above patient?

2. Bridget is a very fair skinned female. She is very active outdoors and as an adult she puts on sunscreen whenever she is going to be outdoors for more than 2 hours. She remembers having several blistering sunburns as a child. She has a few rough, patchy areas of skin. Bridget is at risk for skin cancer.

A. What should she look for in the future in terms of early detection?

3. Henry is a sales representative who travels often and eats meals out on a regular basis. Henry feels that skipping dessert except on weekends is an adequate diet plan. His job is stressful and he does not have time to exercise.

A. Name two diseases for which Henry has increased risk.

B. How can Henry reduce his risk?

4. Kendra's maternal grandmother died of stroke at the age of 40, her paternal grandfather died of "natural causes" at the age of 55. Kendra's mother and father both suffer from hypertension (high blood pressure).

A. What are the symptoms of hypertension?

B. How can Kendra reduce her risk of developing hypertension?

5. Brenda's mother and grandmother were both diagnosed with breast cancer in their early 40's. Brenda started menstruating early (by the age of 10) and is slightly overweight. She did not have her first child until after the age of 32. She is now 36 years old.

A. What should Brenda do on a monthly basis one week after she starts menstruating?

B. If Brenda finds a lump during her BSE (Breast Self Exam); what is the only definitive test for cancer?

6. Tom just finished learning about non-communicable disease in his health class. While at the mall a sixty year old male had a medical emergency. Tom believed he may have had a stroke based on his symptoms.

A. His symptoms might have been (list 3):

B. What should Tom do?

7. Travis has a family history of heart disease and diabetes. Travis loves to eat and rarely has time for exercise. When Travis is outdoors coaching his son's soccer team, he breaks out in a cold sweat, has difficulty breathing and feels nauseous.

A. What might be the problem?

B. What should Travis do?

8. Timothy was a seventeen year old male. It is suggested that all males perform a \_\_\_\_\_ in the privacy of their own home once a month. The age group most often affected by testicular cancer is \_\_\_\_ - 35 years of age. If a male find a lump in his genitals that does not belong he should go see his doctor. The doctor will do an exam and take a small sample of the "tumor"; this is called a \_\_\_\_\_, which is the only definitive test for cancer. A doctor may order other tests such as a MRI, PET scan, CAT scan, blood work, etc. to determine if there is a growth and to look for certain characteristics.

9. List the seven warning signs for cancer... use "CAUTION".

**C** \_\_\_\_\_  
**A** \_\_\_\_\_  
**U** \_\_\_\_\_  
**T** \_\_\_\_\_  
**I** \_\_\_\_\_  
**O** \_\_\_\_\_  
**N** \_\_\_\_\_

10. For which diseases can a person reduce their risk by exercising, flossing and brushing teeth, maintaining a healthy weight and eating a well balance nutritious diet (that includes many fruits, vegetables and fiber, low fat and complex carbohydrates)? *List five minimum.*

11. List the symptoms for the following conditions:

**Heart attack:**

**Stroke:**

# Introduction to Drugs

## I. What is a drug?

A substance other than food intended to affect the structure or function of the body or mind.

## II. How are drugs administered?

- **IV** – intravenous – entering a vein
- **IM** – intramuscular – entering a muscle
- **Inhalation** – smoking, inhaler, snorting, etc.
- **Oral** – pills, liquid, etc.
- **Absorption** – patches, suppositories, creams, ointments, etc.
- **Implantation** – placement of a drug under the skin

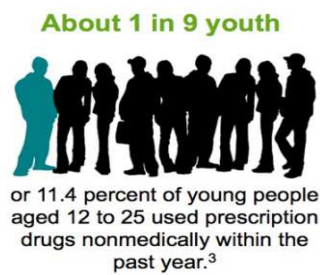
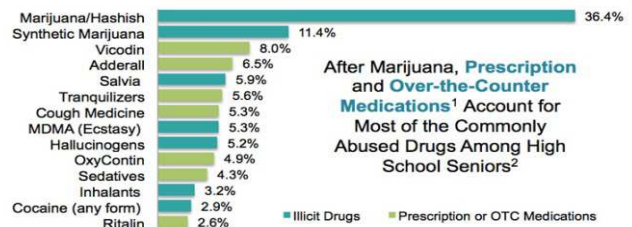
## III. Drug Use, Drug Misuse, Drug Abuse

- **Drug Use** – using a drug correctly and for its intended purpose
- **Drug Misuse** – using a drug incorrectly
- **Drug Abuse** – not using a drug properly or using a drug for the wrong purpose

## IV. Over-the-Counter versus Prescription

- **Over-the-Counter (OTC):** You can purchase these medications without a doctor's written permission
- **Prescription (Rx):** One needs a doctor's permission to obtain/purchase these medications/drugs
- **Medicinal Use:** \_\_\_\_\_
- **Recreational Use:** \_\_\_\_\_

\* New York State School Law strictly prohibits the administration of any substance/drug during school hours without the written consent of a medical doctor. All medications must be kept in the nurse's office at school unless special permission is granted by both school nurse and physician.



<sup>1</sup>Past Year Use  
<sup>2</sup>Monitoring the Future Survey, 2011  
<sup>3</sup>National Survey on Drug Use and Health, 2010

CATEGORY/ TYPE	SHORT-TERM EFFECTS	LONG-TERM EFFECTS	MEDICINAL USES
<b>Stimulants</b> Ex: caffeine, amphetamines, methamphetamine, cocaine, crack, nicotine			
<b>Depressants</b> Ex: alcohol, barbiturates, tranquilizers, methaqualone			
<b>Narcotics</b> Ex: opium, heroin, morphine, codeine, methadone, Vicodin, oxycodone			
<b>Hallucinogens</b> Ex: LSD, Psilocybin (Shrooms), mescaline (peyote), PCP (angel dust), MDMA (ecstasy)			
<b>Marijuana</b> pot, Cannabis, weed, dope, hydro, reefer, sinsemilla, THC			Currently, smoking marijuana is <b>not</b> recommended for the treatment of any disease or condition.
<b>Inhalants</b> Ex: glues, gasoline, adhesives, cleaners, propellants			
<b>Steroids</b> Anabolic steroids are man-made substances related to male sex hormones: androgenic (promoting male characteristics) anabolic (muscle building)			





## Drug Vocabulary Matching



\_\_\_\_\_ Adulterant

\_\_\_\_\_ Alcohol

\_\_\_\_\_ Analgesics

\_\_\_\_\_ Date Rape Drugs

\_\_\_\_\_ Euphoria

\_\_\_\_\_ Flashback

\_\_\_\_\_ Interaction

\_\_\_\_\_ Overdose

A. Medications that relieve pain

B. Feeling of well-being

C. Any substance that lessens the purity or effectiveness of a substance

D. A depressant drug that decreases the responses of the central nervous system; liquid formed by the fermentation of sugars

E. A strong, sometimes fatal reaction; due to using a large amount of a drug

F. Drugs used to assist a sexual assault; often have no color, smell, or taste and dissolve easily into liquids

G. The results from combining two or more drugs

H. spontaneous recurrence of visual images or hallucinations; due to drug use

\_\_\_\_\_ Oxidation

\_\_\_\_\_ Physical Addiction

\_\_\_\_\_ Psychological Addiction

\_\_\_\_\_ Nicotine

\_\_\_\_\_ Side Effects

\_\_\_\_\_ Synergism

\_\_\_\_\_ Tolerance

\_\_\_\_\_ Withdrawal Symptoms

1. Unwanted effects of a medication

2. Interaction of discrete agents (as drugs) such that the total effect is greater than the sum of the individual effects

3. The capacity of the body to endure or become less responsive to a substance (as a drug) or a physiological insult especially with repeated use or exposure (developed a tolerance to painkillers)

4. The syndrome of often painful physical and psychological symptoms that follows discontinuance of an addicting substance

5. Process of breaking down alcohol by the liver

6. Addicting stimulant in tobacco smoke

7. Psychological need to continue a specific behavior or use of a substance

8. Physical need to continue a specific behavior or use of a substance

# Nicotine & Smoking

## I. Components of tobacco smoke:

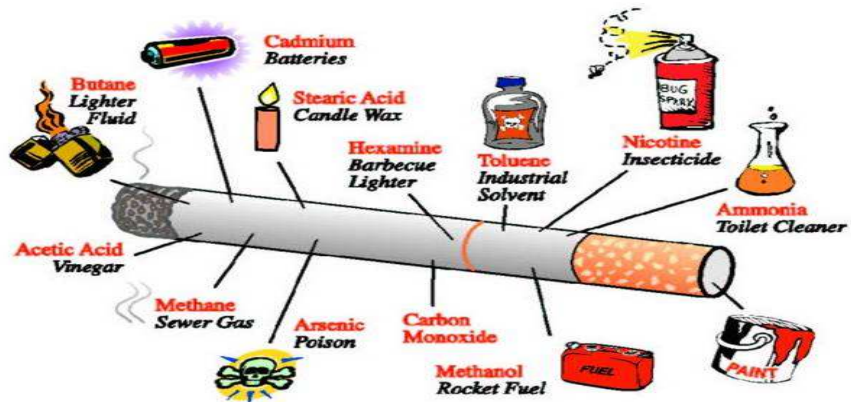
**Nicotine:** the addictive stimulant substance in tobacco products

**Tar:** sticky, brown substance that is the main carcinogen in tobacco products

**Carbon monoxide:** poisonous, colorless, odorless gas that robs the cells of oxygen

## Other ingredients:

cigarette smoke contains between 400-4000 chemicals!



## III. Effects on Body

- speeds heart rate
- makes heart wasteful of energy
- increases blood pressure
- increases blood sugar
- increases blood fat
- accelerates clotting time of blood

## IV. Long Range Health Effects

- cardiovascular disease
- emphysema
- narrowing of blood vessels
- chronic bronchitis

## V. Pregnancy and smoking

- Lower the amount of oxygen available to you and your growing baby.
- Increase your baby's heart rate.
- Increase the chances of miscarriage and stillbirth.
- Increase the risk that your baby is born prematurely and/or born with low birth weight.
- Increase your baby's risk of developing respiratory (lung) problems.
- Increases risks of birth defects.
- Increases risk of Sudden Infant Death Syndrome.

## VI. Other forms of products containing nicotine.

- Hookah
- Snus
- E-cigarettes
- Orbs
- Dissolvables



# Alcohol

**Ethyl Alcohol:**  $C_2H_5OH$  – colorless, odorless, depressant drug which slows CNS. It is toxic causing alcohol poisoning; can be lethal.

**Alcohol is the #1 drug problem in America.** Approximately 2.9 gals/person/yr are consumed. **Binge drinking** is defined as 5 or more drinks (males) or 4 or more drinks (female) on any one occasion and is a major problem for youth.

Proof is 2x the percent of alcohol in the beverage. Therefore, 100 proof = 50% alcohol and 80<sup>o</sup> = 40% alcohol.

**Hard liquor** is usually 40-50% alcohol, **wine** is usually 9-14%, and **beer/wine coolers** are about 4-7%

## **Blood Alcohol Content (BAC)**

.02% BAC = 4oz glass of wine = 12oz bottle of beer = 1oz shot of liquor

.02% BAC is reduced or oxidized per hour in the liver. 90% of ingested alcohol is burned for energy or stored, 10% expired with exhalation.  $\frac{1}{2000}$  BAC is exhaled in each breath – that is how **Breathalyzer Test** works. .05% = DWAI .08% = DWI

**Physical Effects:** lower body temperature, dehydration, vasodilator - opens blood vessels, causing warm feeling, flush to skin, loss of heat; releases inhibitions – reduces anxiety, anemia, slows CNS – motor coordination, control, judgment, speech, digestion, reasoning, reactions, can interact with other medications or illicit drugs. (**Intoxication**)

**Long Range Effects:** cirrhosis of liver, nutritional deficiencies, degeneration of brain, ulcers, heart disease, death.

**Fetal Alcohol Syndrome:** One of the most severe effects of drinking during pregnancy is fetal alcohol syndrome (FAS). FAS is a group of problems that can include mental retardation, birth defects, abnormal facial features, behavior problems, etc.

**Zero Tolerance:** Under New York State's "Zero Tolerance Law," a driver under 21 will have his or her license suspended for a minimum of six months if found to have any measurable BAC (from .02 or higher).

**Help:** Alcoholics Anonymous – 12 Step Program, detoxification and rehabilitation, counseling; group and/or individual, Alanon and Alateen for family members.



## Alcohol's effect on the Body/Mind

Average # of drinks	Blood Alcohol Content	Behavior
1 – 2	.05%	<ul style="list-style-type: none"> <li>• Feeling of well-being</li> <li>• Decrease in inhibitions</li> <li>• Increase in risk of collision while driving</li> <li>• Decreased coordination and alertness</li> <li>• Impaired judgment</li> </ul>
3 – 5	.10%	<ul style="list-style-type: none"> <li>• Reaction time is significantly slowed</li> <li>• Muscle control and speech are impaired</li> <li>• Limited night and side vision</li> <li>• Loss of self-control</li> <li>• Risk of accident while driving greatly increased</li> </ul>
6 – 7	.15%	<ul style="list-style-type: none"> <li>• Consistent and major decrease in reaction time</li> </ul>
8 – 10	.20%	<ul style="list-style-type: none"> <li>• Loss of equilibrium</li> <li>• Sensory and motor capabilities depressed</li> <li>• Double vision and legal blindness</li> </ul>
10 – 14	.20% - .25%	<ul style="list-style-type: none"> <li>• Severe motor disturbances</li> </ul>
10 – 14	.30%	<ul style="list-style-type: none"> <li>• Not aware of surroundings</li> </ul>
10 – 14	.35%	<ul style="list-style-type: none"> <li>• Surgical anesthesia</li> <li>• Lethal dosage for a small % of people</li> </ul>
14 – 20	.40%	<ul style="list-style-type: none"> <li>• Lethal dosage for about 50% of people</li> <li>• Severe circulatory/respiratory depression</li> <li>• Alcohol poisoning/overdose</li> </ul>

### Calculating Blood Alcohol Content Weight in Pounds

Number of drinks (1 hour)	-----	100	120	140	160	180	200	220	240
	<b>1</b>	.04	.03	.03	.02	.02	.02	.02	.02
<b>2</b>	.08	.06	.05	.05	.04	.04	.04	.03	.03
<b>3</b>	.11	.09	.08	.07	.06	.06	.06	.05	.05
<b>4</b>	.15	.12	.11	.09	.08	.08	.08	.07	.06
<b>5</b>	.19	.16	.13	.12	.11	.09	.09	.09	.08
<b>6</b>	.23	.19	.16	.14	.13	.11	.11	.10	.09
<b>7</b>	.26	.22	.19	.16	.15	.13	.13	.12	.11
<b>8</b>	.30	.25	.21	.19	.17	.15	.15	.14	.13
<b>9</b>	.34	.28	.24	.21	.19	.17	.17	.15	.14
<b>10</b>	.38	.31	.27	.23	.21	.19	.19	.17	.16

\* Reasons alcohol affects people differently could include: age, weight, gender, mood, speed of consumption, genetics, other drugs, food, other diseases, mixers, proof, liver function, etc.

# FAQs on Alcohol Abuse and Alcoholism

## **#1: What is alcoholism?**

Alcoholism, also known as alcohol dependence, is a disease that includes the following four symptoms:

- Craving--A strong need, or urge, to drink.
- Loss of control--Not being able to stop drinking once drinking has begun.
- Physical dependence--Withdrawal symptoms, such as nausea, sweating, shakiness, and anxiety after stopping drinking.
- Tolerance--The need to drink greater amounts of alcohol to get "high."

## **#2: Is alcoholism a disease?**

Yes, alcoholism is a disease. The craving that an alcoholic feels for alcohol can be as strong as the need for food or water. An alcoholic will continue to drink despite serious family, health, or legal problems.

Like many other diseases, alcoholism is chronic, meaning that it lasts a person's lifetime; it usually follows a predictable course; and it has symptoms. The risk for developing alcoholism is influenced both by a person's genes and by his or her lifestyle.

## **#3: Can alcoholism be treated?**

Yes, alcoholism can be treated. Alcoholism treatment programs use both counseling and medications to help a person stop drinking. Most alcoholics need help to recover from their disease. With support and treatment, many people are able to stop drinking and rebuild their lives.

## **#4: How can you tell if someone has a problem?**

Answering the following four questions can help you find out if you or a loved one has a drinking problem:

- Have you ever felt you should cut down on your drinking?
- Have people annoyed you by criticizing your drinking?
- Have you ever felt bad or guilty about your drinking?
- Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?

One "yes" answer suggests a possible alcohol problem. More than one "yes" answer means it is highly likely that a problem exists. If you think that you or someone you know might have an alcohol problem, it is important to see a doctor or other health care provider right away. They can help you determine if a drinking problem exists and plan the best course of action.

# Tobacco / Alcohol Questions

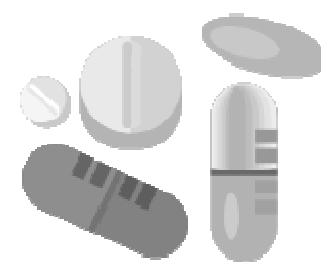
Directions: Use workbook pages on tobacco and alcohol to answer the following questions.

1. What is nicotine and where is it found?
2. It has been said that there are between 400 – 4000 components in burning tobacco. List three other ingredients in tobacco smoke.
3. List 5 short term affects smoking cigarettes has on the body.
4. List 5 possible long term effects that smoking cigarettes has on the body.
5. If cigarettes cost \$10.00 per pack and a person smokes 1 pack per day. What is their total cost over a period of 6 months (average 30 days per month)? How much will they spend during the next 1 and 5 years if the price of cigarettes if the price does not increase?

6 months: \_\_\_\_\_ 1 year: \_\_\_\_\_ 5 years: \_\_\_\_\_

6. What is ethyl alcohol?
7. What is "Binge Drinking"? Is it different for males and females?
8. What is considered one drink?  
\_\_\_\_ BAC = \_\_\_\_ ounces of wine = \_\_\_\_ ounces of beer = \_\_\_\_ ounces of 100 proof hard liquor
9. What BAC is considered DWI in NYS? \_\_\_\_\_ DWAI? \_\_\_\_\_
10. At a BAC of .05 what behaviors are occurring? \_\_\_\_\_
11. List 5 effects alcohol has on the body.
12. What is "Fetal Alcohol Syndrome"?
13. Define Alcoholism. What is Alcoholics Anonymous? Are there other programs for Alcoholics and their families?
14. What is "zero tolerance"?

## Over-the-counter Pain Reliever guide: Compare Before Choosing



The nonprescription oral pain relievers that line the aisles in your local drugstore aren't all the same. But they fall into two main categories:

- **Pain relievers that decrease inflammation.** Often called non-steroidal anti-inflammatory drugs (NSAIDs), this group includes medications with aspirin, ibuprofen, naproxen sodium or ketoprofen.
- **Pain relievers that don't decrease inflammation.** The active ingredient in these medications is acetaminophen.

In general, all regular-strength doses of over-the-counter (OTC) pain medications provide comparable relief for everyday pains. But the effectiveness of a particular NSAID varies from person to person. You may want to try different pain relievers to find out which one works best for you.

Just remember that individual factors, such as your medical history and other medications you're taking, may limit your OTC pain reliever options. So, read the labels carefully. If you're not sure whether a particular OTC pain reliever is right for you, ask your pharmacist or doctor. Over-the-counter medications are safe when taken as directed, but they're not without risk. The fact that you don't need a prescription doesn't mean that you can't ask for some advice.

Active ingredient	Acetaminophen	Aspirin	Ibuprofen	Naproxen sodium	Ketoprofen
<b>Brand-name examples</b>	Tylenol	Ascriptin, Bayer, Bufferin, Ecotrin	Advil, Motrin IB	Aleve	Orudis KT
<b>Uses</b>	Treats pain and fever	Treats pain, fever and inflammation	Treats pain, fever and inflammation	Treats pain, fever and inflammation	Treats pain, fever and inflammation
<b>Length of pain relief (1)</b>	4 to 6 hours	4 to 6 hours	4 to 6 hours	8 to 12 hours	6 to 8 hours
<b>Common side effects</b>	Rare when taken as directed for short periods (days to weeks)	Stomach pain, heartburn, constipation, or dizziness	Stomach pain, heartburn, constipation or dizziness	Stomach pain, heartburn, constipation or dizziness	Stomach pain, heartburn, constipation or dizziness
<b>Possible serious complications</b>	Liver damage when used long term at high doses	Stomach bleeding, impairment of kidney function, liver dysfunction or allergic reaction	Stomach bleeding, impairment of kidney function, liver dysfunction or allergic reaction. Prolonged use above the	Stomach bleeding, impairment of kidney function, liver dysfunction or allergic reaction. Prolonged use	Stomach bleeding, impairment of kidney function, liver dysfunction or allergic reaction. Prolonged use

Active Ingredient	Acetaminophen	Aspirin	Ibuprofen	Naproxen Sodium	Ketoprofen
			recommended dosage may increase risk of cardiovascular events and serious skin reactions.	above the recommended dosage may increase risk of cardiovascular events and serious skin reactions.	above the recommended dosage may increase risk of cardiovascular events and serious skin reactions.
<b>Conditions it may worsen (2)</b>	Severe kidney disease or liver disease	Asthma, diabetes, bleeding disorder, gout, kidney disease, liver disease or stomach ulcers	Liver, heart or kidney disease; high blood pressure; bleeding disorder; or stomach problems	Liver, heart or kidney disease; high blood pressure; bleeding disorder; or stomach problems	Liver, heart or kidney disease; high blood pressure; bleeding disorder; or stomach problems
<b>Drugs you should <i>not</i> take it with (3)</b>	Alcohol or other medicines that contain acetaminophen	Alcohol, blood thinners, corticosteroids, medications for high blood pressure or diabetes, methotrexate, or probenecid	Alcohol, blood thinners, diuretics, medications for arthritis or diabetes, aspirin, or other over-the-counter pain relievers	Alcohol, blood thinners, diuretics, medications for arthritis or diabetes, aspirin, or other over-the-counter pain relievers	Alcohol, blood thinners, diuretics, medications for arthritis or diabetes, aspirin, or other over-the-counter pain relievers
<b>Safe for children?</b>	Yes (4)	No (5)	Yes (4)	No, except for age 12 and over	Unknown; not recommended for children
<b>Safe in pregnancy?</b>	Yes, for short-term pain relief	No	No	No	No
<b>Safe in breast-feeding women?</b>	Yes, for short-term pain relief	No	Yes, for short-term pain relief	No	No

(1) Length of pain relief can vary by dosage and the condition being treated.

(2) If you have a chronic illness, check with your doctor before using any over-the-counter medication. This precaution is particularly important for the specific medications and conditions listed here.

(3) Other drug interactions are possible, but over-the-counter pain medications are particularly risky if you take the medications listed here.

(4) Children's formula available. Dosages are based on age and weight. Consult your doctor.

(5) Can cause Reye's syndrome — a life-threatening condition — in children with chickenpox, the flu or other viral illnesses.



**Directions: Use the previous pages answer the following questions.**

1. Which pain reliever is "safe" for children to use?
2. Are all Pain relievers safe for pregnant women to use?
3. Do all pain relievers work for more than 8 hours? Which one(s) do?
4. Are there diseases that make using OTC pain relievers dangerous? Which conditions might they worsen?
5. What drug(s) should you not mix with pain relievers?
6. Use of which medication caused an increased risk of what life-threatening condition in children with the chicken pox, flu or other viral illness? (see footnotes)
7. What are some common side effects of using aspirin, acetaminophen or ibuprofen?
8. What are possible complications when using  
Acetaminophen:  
  
Aspirin, Ibuprofen, Naproxen sodium:
9. All of the pain relievers reduce pain and fever, which pain reliever does not reduce inflammation?
10. Which pain relievers are safe to use?  
  
During pregnancy:  
  
While breast feeding:

# What is prescription drug abuse?

Although most people take prescription medications responsibly, there has been an increase in the nonmedical use of or abuse of prescription drugs in the United States.

The three classes of prescription drugs that are most commonly abused are:

- Opioids, which are most often prescribed to treat pain;
- Central nervous system (CNS) depressants, which are used to treat anxiety and sleep disorders; and
- Stimulants, which are prescribed to treat the sleep disorder narcolepsy and attention-deficit hyperactivity disorder (ADHD).

Opioids are commonly prescribed because of their effective analgesic, or pain-relieving, properties. Medications that fall within this class-referred to as prescription narcotics-include morphine (e.g., Kadian, Avinza), codeine, oxycodone (e.g., OxyContin, Percodan, Percocet), and related drugs. Morphine, for example, is often used before and after surgical procedures to alleviate severe pain. Codeine, on the other hand, is often prescribed for mild pain. In addition to their pain-relieving properties, some of these drugs-codeine and diphenoxyllate (Lomotil) for example-can be used to relieve coughs and diarrhea.

Taken as directed, opioids can be used to manage pain effectively. Many studies have shown that the properly managed, short-term medical use of opioid analgesic drugs is safe and rarely causes addiction-defined as the compulsive and uncontrollable use of drugs despite adverse consequences-or dependence, which occurs when the body adapts to the presence of a drug, and often results in withdrawal symptoms when that drug is reduced or stopped. Withdrawal symptoms include restlessness, muscle and bone pain, insomnia, diarrhea, vomiting, cold flashes with goose bumps ("cold turkey"), and involuntary leg movements. Long-term use of opioids can lead to physical dependence and addiction. Taking a large single dose of an opioid could cause severe respiratory depression that can lead to death.

Only under a physician's supervision can opioids be used safely with other drugs. Typically, they should not be used with other substances that depress the CNS, such as alcohol, antihistamines, barbiturates, benzodiazepines, or general anesthetics, because these combinations increase the risk of life-threatening respiratory depression.

1. Which three groups of drugs are most commonly abused?
  
  
  
  
  
  
  
  
  
  
2. If a person combines opioids with other drugs what risks do they face?

# Heroin and Prescription Opioids

Prescription drug misuse occurs when a person takes a prescription medication that is not prescribed for him/her, or takes it for reasons or in dosages other than as prescribed. The nonmedical use of prescription medications has increased in the past decade and has surpassed all illicit drug usage except marijuana in the United States. Misuse of prescription drugs can produce serious health effects, including addiction. One of the most striking aspects of the misuse of prescription medications has been the increase in painkiller abuse, which can lead to heroin use.

- Prescription analgesic overdoses killed nearly 15,000 people in the US in 2008, more than three times the 4,000 killed by these medications in 1999. (*CDC Vital Signs 11/2011*)
- Young adults ages 18 - 24 are particularly at risk, with increases in heroin/opioid admissions for treatment throughout the state. In particular, upstate New York (222% increase in admissions) and Long Island (242% increase) have been hard hit by this problem. (*NYS Client Data System*)
- In 2011, nonmedical use of prescription drugs among youth ages 12 - 17 and young adults ages 18 - 25 was the second most prevalent illicit drug use category, with marijuana being first. (*NSDUH 2011*)
- Between 2007 and 2012, the number of individuals using heroin during the past 30 days more than doubled nationwide (161,000 to 335,000). (*NSDUH 2012*)
- The percentage of New York State high school students who reported using heroin more than doubled between 2005 and 2011 (1.8 % to 4%). (*Youth Risk Behavior Survey (YRBS)*)

## Heroin and Prescription Drug Abuse Can Be Addictive and Deadly

### Loss of tolerance

Regular use of opioids leads to greater tolerance. For example, more is needed to achieve the same effect (high). Overdoses occur when people begin to use again. This is usually following a period of not using (abstinence) such as after coming out of treatment.

### Mixing drugs

Mixing heroin or prescription opioids with other drugs, especially depressants such as benzodiazepines (Xanax, Klonopin, etc.) or alcohol, can lead to an accidental overdose, respiratory problems and death. The effect of mixing drugs is greater than the effect one would expect if taking the drugs separately.

### Variation in strength of heroin

Heroin may vary in strength and effect based on the purity.

### Serious illness

Users with serious illness such as HIV/AIDS, hepatitis B and C, heart disease, and endocarditis are at greater risk for overdose.

## Prevent Prescription Drug Misuse

**Despite what some people may assume, abusing prescription drugs is not safe.**

**Safeguard Your Meds** by placing your prescribed medication in a secure location and tracking the number of pills at all times

- Routine tracking of your prescribed medication is smart, especially when others live with you or visit your dorm room/apartment.
- Never share medication that is prescribed for you.
- Never take medication that was prescribed for someone else.
- Don't mix medications. Speak to your health care provider about all medications you are taking, including over-the-counter medications.

### Pass It On

Share your knowledge, experience and support with your friends and family.



## Ask for Help

There are many confidential resources available for students – if you ask! Ask your health care professional or seek assistance from a mental health or substance abuse counselor.

## Signs and Symptoms

Change in behavior is key when one suspects there is substance abuse. The key is to get the person assistance as soon as possible.

### Physical Signs

- Loss or increase in appetite; unexplained weight loss or gain
- Small pupils, decreased respiratory rate and a non-responsive state are all signs of opioid intoxication.
- Nausea, vomiting, sweating, shaky hands, feet or head, and large pupils are all signs of opioid withdrawal.

### Behavioral Signs

- Change in attitude/personality
- Change in friends; new hangouts
- Avoiding contact with family
- Change in activities, hobbies or sports
- Drop in grades or work performance
- Isolation and secretive behavior
- Moodiness, irritability, nervousness, giddiness, nodding off
- Wearing long-sleeved shirts or layers of clothing out of season
- Stealing

### Advanced Warning Signs

- Missing medications
- Burnt or missing spoons/ bottle caps
- Missing shoelaces/belts
- Small bags with powder residue
- Syringes

## Good Samaritan Law

Some individuals may fear that police will respond to a 911 call and there will be criminal charges for themselves or for the person who overdosed. Those fears should NEVER keep anyone from calling 911 immediately. It may be a matter of life or death.

In September 2011, the 911 Good Samaritan Law went into effect to address fears about a police response to an overdose. This law provides significant legal protection against criminal charges and prosecution for possession of controlled substances, as well as possession of marijuana and drug paraphernalia. This protection applies to both the person seeking assistance in good faith, as well as to the person who has overdosed. Class A-1 drug felonies, as well as sale or intent to sell controlled substances, are not covered by the law.

The following organizations offer information and resources that can help you and your family.



**1-877-8-HOPENY**

Find Help for **1-877-846-7369**  
Alcoholism, Drug Abuse, Problem Gambling



New York State Office of Alcoholism and Substance Abuse Services  
[www.oasas.ny.gov](http://www.oasas.ny.gov)



New York State Department of Health  
[www.health.ny.gov](http://www.health.ny.gov)



[www.combatheroin.ny.gov](http://www.combatheroin.ny.gov)

# Drug Unit Review

1. Alcohol is a depressant drug, one drink is equal to:  
\_\_\_\_\_ ounces of beer, \_\_\_\_\_ ounces of wine, \_\_\_\_\_ ounce(s) of 100 proof liquor
2. Oxidation of alcohol is when the \_\_\_\_\_ breaks down ethyl alcohol at the rate of \_\_\_\_\_ drink per hour for a 160 pound male.
3. Mixing alcohol and other drugs can cause...
  - A. Acetaminophen: \_\_\_\_\_
  - B. Tranquilizers or other drugs: \_\_\_\_\_
4. Long term effects of alcohol abuse are (list 4):
5. BAC stands for \_\_\_\_\_. DWI in NYS is \_\_\_\_\_ or higher. In single-vehicle crashes, the relative risk of a driver with a BAC of .08-.10 is at least 11 times greater than for drivers with a BAC of zero, and 52 times greater for young males.
6. Zero tolerance means that a person under the age of 21 can have no measurable \_\_\_\_\_. In New York State this is a BAC of .02% or below.
7. Alcoholism is a \_\_\_\_\_. It can be defined as having four symptoms: craving, loss of control, physical dependence and tolerance. Help for the alcoholic and family can be found at (list 4 places/groups/options):  
\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_
8. Fetal Alcohol Syndrome (FAS) is caused by a pregnant woman drinking. The more a woman drinks while pregnant the greater the risk... Four signs of FAS include:  
\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_
9. The addicting substance in tobacco smoke is \_\_\_\_\_, the major carcinogenic substance in tobacco smoke is \_\_\_\_\_. There are between 400-4000 chemicals in a burning cigarette. Long term effects of smoking include (list 4 diseases):  
\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_
10. If a pregnant woman smokes it can result in (list 3):  
\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

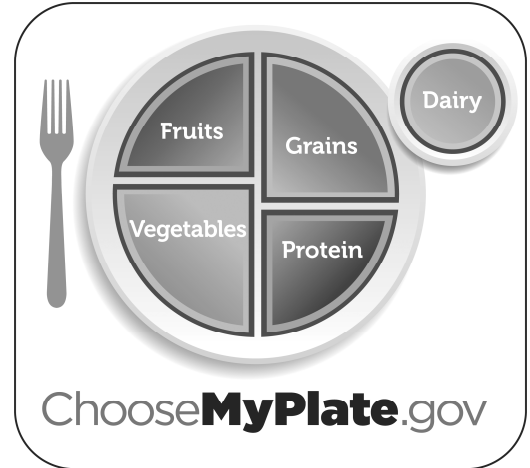
11. Explain why chewing tobacco and cigars are not safe alternatives to cigarettes.
  
12. What is the difference between OTC and prescription drugs?
  
13. Define:
  - A. Tolerance: \_\_\_\_\_
  - B. Synergistic effect: \_\_\_\_\_
  - C. Withdrawal: \_\_\_\_\_
  
14. Are all pain relievers safe and effective? What do you think people should be told about "pain relievers"?
  
15. Describe the relationship between prescription opioids and heroin.
  
16. List two drugs in each category and list the effects along with medical uses if any.

Drug Category	Effects	Medical uses
Stimulants		
Depressants		
Narcotics		
Hallucinogens		
Marijuana		
Inhalants		
Steroids		

# Nutrition

## The Dietary Guidelines:

1. Enjoy your food, but eat less.
2. Avoid oversized portions.
3. Make half your plate fruits and vegetables.
4. Switch to fat-free or low-fat (1%) milk.
5. Make at least half your grains whole grains.
6. Compare sodium in foods like soup, bread, and frozen meals—and choose foods with lower numbers.
7. Drink water instead of sugary drinks.



## Find your balance between food and physical activity

- Be sure to stay within your daily calorie needs.
- Be physically active for at least 30 minutes most days of the week.
- About 60 minutes a day of physical activity may be needed to prevent weight gain.
- For sustaining weight loss, at least 60 to 90 minutes a day of physical activity may be required.
- Children and teenagers should be physically active for 60 minutes every day, or most days

## How Much Do I Need to Eat?

A balanced diet is one that includes all of the food groups. Everyone wants to know how much they should eat to stay healthy. It's a tricky question, though. It depends on your age, whether you're a girl or a boy, and how active you are. Kids who are more active burn more calories, so they need more calories. Visit the website to find out how much of each food group and how many calories YOU need.

### MY DIETARY GUIDELINES

Sex: \_\_\_\_\_ Age: \_\_\_\_\_ Activity Level: \_\_\_\_\_

Total Calories: \_\_\_\_\_

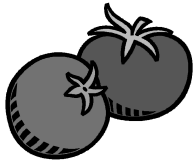
Grains	Vegetables	Fruits	Protein	Dairy
Oz.	cups	cups	Oz.	cups

[Make half whole!]

[Eat a wide variety of colors each day!]

[Go lean with protein! (lower in fat)]

**\*Any food made from wheat, rice, oats, cornmeal, barley, or another cereal grain is a grain product.** Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples. Grains are divided into two subgroups, **whole grains** and **refined grains**. Whole grains contain the entire grain kernel—the bran, germ, and endosperm. People who eat whole grains as part of a healthy diet have a reduced risk of some chronic diseases.



# Build a Healthy Meal



## 10 tips for healthy meals

**A healthy meal starts with more vegetables and fruits and smaller portions of protein and grains.** Think about how you can adjust the portions on your plate to get more of what you need without too many calories. And don't forget dairy—make it the beverage with your meal or add fat-free or low-fat dairy products to your plate.

- 1. Make half your plate veggies and fruits** Vegetables and fruits are full of nutrients and may help to promote good health. Choose red, orange, and dark-green vegetables such as tomatoes, sweet potatoes, and broccoli.
- 2. Add lean protein** Choose protein foods, such as lean beef and pork, or chicken, turkey, beans, or tofu. Twice a week, make seafood the protein on your plate.
- 3. Include whole grains**  
Aim to make at least half your grains whole grains. Look for the words "100% whole grain" or "100% whole wheat" on the food label. Whole grains provide more nutrients, like fiber, than refined grains.
- 4. Don't forget the dairy** Pair your meal with a cup of fat-free or low-fat milk. They provide the same amount of calcium and other essential nutrients as whole milk, but less fat and calories. Don't drink milk? Try soymilk (soy beverage) as your beverage or include fat-free or low-fat yogurt in your meal.
- 5 Avoid extra fat** Using heavy gravies or sauces will add fat and calories to otherwise healthy choices.  
For example, steamed broccoli is great, but avoid topping it with cheese sauce. Try other options, like a sprinkling of low-fat parmesan cheese or a squeeze of lemon.
- 6. Take your time** Savor your food. Eat slowly; enjoy the taste and textures, and pay attention to how you feel. Be mindful. Eating very quickly may cause you to eat too much.
- 7. Use a smaller plate**  
Use a smaller plate at meals to help with portion control. That way you can finish your entire plate and feel satisfied without overeating.
- 8. Take control of your food**  
Eat at home more often so you know exactly what you are eating. If you eat out, check and compare the nutrition information. Choose healthier options such as baked instead of fried.
- 9. Try new foods**  
Keep it interesting by picking out new foods you've never tried before, like mango, lentils, or kale. You may find a new favorite! Trade fun and tasty recipes with friends or find them online.
- 10. Satisfy your sweet tooth in a healthy way**  
Indulge in a naturally sweet dessert dish—fruit! Serve a fresh fruit cocktail or a fruit parfait made with yogurt. For a hot dessert, bake apples and top with cinnamon.

Center for Nutrition *USDA 6/2011*



# Nutrition Tips for Vegetarians

A vegetarian is a person who does not eat meat, and sometimes other animal products. Vegetarian diets can meet all the recommendations for nutrients. The key is to consume a variety of foods and the right amount of foods to meet your calorie needs. Follow the food group recommendations for your age, sex, and activity level to get the right amount of food and the variety of foods needed for nutrient adequacy. Nutrients that vegetarians may need to focus on include protein, iron, calcium, zinc, and vitamin B<sub>12</sub>.



## Nutrients to focus on for vegetarians

- **Protein** has many important functions in the body and is essential for growth and maintenance. Protein needs can easily be met by eating a variety of plant-based foods. Combining different protein sources in the same meal is not necessary. Sources of protein for vegetarians and vegans include beans, nuts, nut butters, peas, and soy products (tofu, tempeh, veggie burgers). Milk products and eggs are also good protein sources for lacto-ovo vegetarians.
- **Iron** functions primarily as a carrier of oxygen in the blood. Iron sources for vegetarians and vegans include iron-fortified breakfast cereals, spinach, kidney beans, black-eyed peas, lentils, turnip greens, molasses, whole wheat breads, peas, and some dried fruits (dried apricots, prunes, raisins).
- **Calcium** is used for building bones and teeth and in maintaining bone strength. Sources of calcium for vegetarians and vegans include calcium-fortified soymilk, calcium-fortified breakfast cereals and orange juice, tofu made with calcium sulfate, and some dark-green leafy vegetables (collard greens, turnip greens, bok choy, mustard greens). The amount of calcium that can be absorbed from these foods varies. Consuming enough plant foods to meet calcium needs may be unrealistic for many. Milk products are excellent calcium sources for lacto vegetarians. Calcium supplements are another potential source.
- **Zinc** is necessary for many biochemical reactions and also helps the immune system function properly. Sources of zinc for vegetarians and vegans include many types of beans (white beans, kidney beans, and chickpeas), zinc-fortified breakfast cereals, wheat germ, and pumpkin seeds. Milk products are a zinc source for lacto vegetarians.
- **Vitamin B<sub>12</sub>** is found in animal products and some fortified foods. Sources of vitamin B<sub>12</sub> for vegetarians include milk products, eggs, and foods that have been fortified with vitamin B<sub>12</sub>. These include breakfast cereals, soymilk, veggie burgers, and nutritional yeast.

## Tips for Vegetarians:

- Build meals around protein sources that are naturally low in fat, such as beans, lentils, and rice. Don't overload meals with high-fat cheeses to replace the meat.
- Calcium-fortified soymilk provides calcium in amounts similar to milk. It is usually low in fat and does not contain cholesterol.
- Many foods that typically contain meat or poultry can be made vegetarian. This can increase vegetable intake and cut saturated fat and cholesterol intake.
- Most restaurants can accommodate vegetarian modifications to menu items by substituting meatless sauces, omitting meat from stir-fries, and adding vegetables or pasta in place of meat. These substitutions are more likely to be available at restaurants that make food to order.
- Many Asian and Indian restaurants offer a varied selection of vegetarian dishes.

# Benefits of a Plant-Based Diet

Cancer experts agree that eating a variety of colorful fruit and vegetables, grains, and legumes (dried peas and beans) aids in the fight against cancer. By making simple diet and lifestyle changes, you may reduce your risk for cancer as well as your risk for other chronic diseases like heart disease and diabetes mellitus.

A plant-based diet emphasizes vegetables, fruits, legumes, and whole grains. These foods are good sources of protein, carbohydrates, fat, vitamins, and minerals. They are also naturally lower in calories than foods made from animals. Colorful plant foods are also good sources of *phytochemicals*. Phytochemicals are naturally present in plant foods, and they can help to protect our body's cells from damage by cancer-causing agents. They also help support overall health. Eating a plant-based diet does not mean that you have to become a vegetarian; it just means that you should try to select most of your foods from plant sources.

The American Institute for Cancer Research (AICR) recommends these guidelines for adopting a plant-based diet using their New American Plate\*:

- ✓ Plant-based foods like vegetables, fruits, whole grains, and beans should cover two thirds or more of the plate. Fish, poultry, meat, or low-fat dairy foods should cover no more than one third of the plate.
- ✓ Include substantial portions of one or more vegetables or fruits on your plate—not just grain products like pasta or whole-grain bread.
- ✓ Eat five or more servings every day of a variety of colorful vegetables and fruits.
- ✓ Eat more than seven servings a day of a variety of grains (breads, cereals, pasta, and rice), legumes, and tubers (potatoes and sweet potatoes).
- ✓ Choose minimally processed foods and limit consumption of refined sugar.

**Answer the following questions based on the information on vegetarian and plant-based diets.**

**1. Explain why plant-based diets are considered to be extremely beneficial to our health.**

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**2. How can a vegetarian be sure to meet all nutritional needs?**

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**3. What nutrients do vegetarians need to be careful about getting enough of?**

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**4. What are phytochemicals and where are they found?**

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**5. Could you ever see yourself following a more “plant-based” approach to eating? Why/why not?**

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# Nutrition Vocabulary

**Amino Acids** – building blocks that make up proteins

**Antioxidants** – substances that protect cells from being damaged by oxygen

**Calorie** – measures energy supplied by food and energy used by the body

**Carbohydrates** – nutrients that provide energy to the body

**Cholesterol** – a fat-like substance made by the body and found in many foods

**Complementary Proteins** – 2 or more sources of protein which provide all of the essential amino acids when consumed together

**Complete Proteins** – proteins from animal sources that contain all the essential amino acids

**Complex Carbohydrates** – starches and fiber

**Desired Weight** – the weight that is recommended for a person's age, height, sex and body frame

**Empty Calories** – little or no nutritional value in a food

**Essential Amino Acids** – nine amino acids the body cannot produce. They must be ingested in the diet in the proper amounts

**Fat** – nutrient that is a source of energy and makes certain vitamins available to the body

**Fat-Soluble Vitamins** – vitamins that dissolve in fat and get stored in the body (A,D,E,K)

**Fiber** – the part of grains and plant food that cannot be digested but are extremely important for a healthy digestive tract

**High Density Lipoprotein (HDL)** – substances that carry cholesterol to the liver for breakdown and excretion

**Hypoglycemia** – a condition in which the pancreas produces too much insulin and blood sugar levels become low

**Incomplete Proteins** – proteins from plant sources that do not have all of the essential amino acids

**Insulin** – a hormone that regulates the blood sugar level

**Lipoproteins** – substance that transports cholesterol in the bloodstream

**Low Density Lipoprotein (LDL)** – substances that carry cholesterol to the body cells

**Minerals** – nutrients that regulate many chemical reactions in the body

**Nutrient** – a chemical substance in foods that builds, repairs, maintains body tissues, regulates body processes, and provides energy

**Organic Foods** – foods produced without the use of pesticides, additives, or other chemicals; also does not use genetic engineering or radiation for food production

**Protein** – a nutrient needed to build, repair and maintain body tissues

**Simple Carbohydrates** – sugars that enter the bloodstream quickly and provide quick temporary energy

**Saturated Fats** – fats from dairy products, solid vegetable fats, and animal red meats

**Trans Fats** – type of processed fat that does not occur in nature; also called hydrogenated or partially hydrogenated oil; increase the likelihood of cardiovascular diseases

**Unsaturated Fats** – fats from fish and plant products

**Vitamins** – nutrients that help chemical reactions take place in the body

**Water** – the primary nutrient that makes up a part of blood. Helps processes in digestion, helps remove body wastes, regulates body temperature, and cushions the spinal cord and joints

**Water-Soluble Vitamins** – cannot be stored in the body in significant amounts



# Nutrition Vocabulary Quiz

Match each definition with the correct vocabulary word.

- \_\_\_\_\_ 1. Type of processed fat that does not occur in nature; also called hydrogenated or partially hydrogenated oil; increase the likelihood of cardiovascular diseases.
- \_\_\_\_\_ 2. Nutrients that help chemical reactions take place in the body.
- \_\_\_\_\_ 3. Building blocks that make up proteins.
- \_\_\_\_\_ 4. Nutrients that are a source of energy and make certain vitamins available for use in the body.
- \_\_\_\_\_ 5. Part of grains and plants that cannot be digested but are important for a healthy digestive tract.
- \_\_\_\_\_ 6. Unit of measure for both the energy supplied by food and the energy used by the body for physical activity and normal body functions.
- \_\_\_\_\_ 7. Vitamins that cannot be stored by the body in significant amounts.
- \_\_\_\_\_ 8. Nutrients that provide energy to the body.
- \_\_\_\_\_ 9. Substances that protect cells from being damaged by oxygen.
- \_\_\_\_\_ 10. Foods produced without the use of pesticides, additives, or other chemicals

- A. Calorie
- B. Amino Acids
- C. Carbohydrates
- D. Fiber
- E. Fats
- F. Antioxidants
- G. Vitamins
- H. Water-Soluble Vitamins
- I. Trans-fats
- J. Organic



## Six Basic Nutrients

NUTRIENT	CALORIES	FACTS	SOURCES	NOTES
P R O T E I N S	1 gram = 4 calories	<ul style="list-style-type: none"> <li>• Essential for growth, development, and repair of body tissues</li> <li>• Form parts of muscle, bone, blood, and cell membranes</li> <li>• Form hormones and enzymes</li> <li>• Made of amino acids (9 are essential)</li> <li>• Complementary proteins</li> </ul>		
C A R B O H Y D R A T E S	1 gram = 4 calories	<ul style="list-style-type: none"> <li>• Provide energy</li> <li>• Simple carbs, such as fruit, enter bloodstream quickly</li> <li>• Complex carbs, such as rice, provide long-lasting energy</li> <li>• Carries other nutrients</li> <li>• Monosaccharides disaccharides, polysaccharides</li> <li>• Fiber</li> <li>• Empty calories</li> </ul>		
F A T S	1 gram = 9 calories	<ul style="list-style-type: none"> <li>• Energy reserve</li> <li>• Essential for making fat-soluble vitamins available (ADEK)</li> <li>• Stored in adipocytes, surround/protect organs</li> <li>• Increase palatability of food</li> <li>• Increase satiety factor</li> <li>• Saturated fats, monounsaturated, polyunsaturated</li> <li>• Hydrogenation and trans fats</li> <li>• Cholesterol</li> </ul>		

<b>NUTRIENT</b>	<b>CALORIES</b>	<b>FACTS</b>	<b>SOURCES</b>	<b>NOTES</b>
V I T A M I N S	0 calories	<ul style="list-style-type: none"> <li>• Potent, non-caloric, organic compounds</li> <li>• Facilitate chemical reactions</li> <li>• Deficiency diseases result if not enough in system</li> <li>• Vitamin A</li> <li>• Thiamine</li> <li>• Riboflavin</li> <li>• Niacin</li> <li>• Folic Acid</li> <li>• Ascorbic Acid</li> </ul>		
M I N E R A L S	0 calories	<ul style="list-style-type: none"> <li>• Inorganic</li> <li>• Assist in the regulation of chemical reactions</li> <li>• Calcium</li> <li>• Iodine</li> <li>• Iron</li> <li>• Phosphorus</li> <li>• Sodium</li> </ul>		
W A T E R	Water does not contain calories, but the food or drink it is in will contain varying amounts of calories	<ul style="list-style-type: none"> <li>• Makes up blood</li> <li>• Aids in the process of digestion</li> <li>• Helps remove wastes from the body</li> <li>• Helps regulate body temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Drinking water</li> <li>• Juices</li> <li>• Soups</li> <li>• Vegetables, such as celery</li> <li>• Herbal teas</li> </ul>	

**::Color Me Healthy::**

**By eating fruits and vegetables of different colors you will get a wide range of phytochemicals!**

<b>Red: lycopene</b>	<b>Red/Purple: anthocyanins</b>	<b>Orange: carotenoids</b>	<b>Orange/Yellow: beta cryptothanxin</b>
<b>Yellow/Green: lutein &amp; zeaxanthin</b>		<b>Green: indoles &amp; suloraphanes</b>	<b>Green/White: allicin, quercetin, &amp; flavinoids</b>

# How to Understand and Use the Nutrition Facts Label

Sample label for  
Macaroni & Cheese

① **Start Here** →

② **Check Calories**

③ **Limit these Nutrients**

④ **Get Enough of these Nutrients**

⑤ **Footnote**

**Nutrition Facts**

Serving Size 1 cup (228g)  
Servings Per Container 2

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**Amount Per Serving**

**Calories** 250      Calories from Fat 110

---

	% Daily Value*
<b>Total Fat</b> 12g	<b>18%</b>
Saturated Fat 3g	<b>15%</b>
<i>Trans</i> Fat 3g	
<b>Cholesterol</b> 30mg	<b>10%</b>
<b>Sodium</b> 470mg	<b>20%</b>
<b>Total Carbohydrate</b> 31g	<b>10%</b>
Dietary Fiber 0g	<b>0%</b>
Sugars 5g	
<b>Protein</b> 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

\* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

⑥

**Quick Guide to % DV**

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• 5% or less is Low

• 20% or more is High

1. Serving size and servings per container: Read this section to determine how many servings are contained in the package and exactly what the serving size is.
2. This section gives the number of calories per serving and calories from fat. Remember that if you eat the entire container you will be consuming 2 servings; therefore you will have consumed 500 calories.
3. Limit these nutrients: (Total fat, saturated fat, trans fat, cholesterol and sodium) These are the nutrients that Americans often consume too much. Trans fat and saturated fats have been linked with increasing LDL cholesterol levels ("bad cholesterol"), both of which increase your risk of coronary heart disease, a leading cause of death in the United States. No daily reference value has been established for sugars. **Other names for added sugar include: corn syrup, high-fructose corn syrup, fruit juice concentrate, maltose, dextrose, sucrose, honey, maple syrup, etc.**
4. Get enough of these nutrients: (Dietary Fiber, Vitamin A, Vitamin C, Calcium and Iron) Eating a diet high in dietary fiber promotes healthy bowel function. Diets rich in fruits, vegetables and whole grain products may reduce the risk of heart disease.
5. Footnote: \* "% Daily Values" are based on a 2,000 calorie diet. This statement must be on all food labels. The remaining information may not be on the package if the size of the label is too small. It contains dietary advice for all Americans.
6. "% Daily Value\*": This includes the recommendations for key nutrients for one day for those on a 2,000 calorie diet. Please note that 5% is low for all nutrients and 20% or more is considered high (especially for those nutrients that you want to limit; e.g. cholesterol, trans fats, saturated fats, sodium and total fat).

# Nutrition Labeling Activity

## Product #1

## Product #2

1. Name of the product.

2. How many calories per serving?

3. How many servings per package?

4. How many grams of (a) Carbohydrate (b) Protein (c) Fat in each product?

a. \_\_\_\_\_ b. \_\_\_\_\_ c. \_\_\_\_\_

a. \_\_\_\_\_ b. \_\_\_\_\_ c. \_\_\_\_\_

5. Would this food be considered mainly fat, protein or carbohydrate?

6. How much cholesterol is in this product?

7. How many grams of dietary fiber are in each serving?

8. How many milligrams of sodium are in each serving?

9. What vitamins are present?

10. What minerals are present?

11. What is the ingredient that is present in the largest amount?

12. List the ingredients that indicate sugar in the product.

13. Which product would you consider to be the healthier of the two? Why?

14. List any ingredients you do not recognize in either product.



## Important Information on Diets

Many people follow specific diets to [lose weight](#). Some of these diets are **fad** or **crash diets** that severely restrict calories or the types of food you are allowed to eat. These diets **rarely** lead to permanent weight loss and often don't provide all of the [nutrients](#) your body needs. To lose weight, you need to use more calories than you eat. Portion control is the key. When trying to lose weight, you can still eat your favorite foods -- as long as you pay attention to the total number of calories that you eat.

### Ways to Spot a Fad Diet

Lots of today's popular diets take advantage of our desire to drop weight quickly. Unfortunately, though, "quick-fix" diets don't work. Here are 5 clues that a diet may be more about empty promises than real results:

- **The diet is based on drastically cutting back calories.**
- **The diet is based on taking special pills, powders, or herbs.**
- **The diet tells you to eat only specific foods or foods in certain combinations.**
- **The diet makes you completely cut out fat, sugar, or carbs.**
- **The diet requires you to skip meals or replace meals with special drinks or food bars.**

Fad diets are often short-term solutions that are not sustainable for long periods of time or do not result in substantial weight loss. Exercise is usually recommended to complement any diet program and will boost results by utilizing more calories and creating muscle mass, which in turn burns calories faster.

Many fad diets can actually have negative health implications. Starvation is not healthy for your body. Ensure you know what is in any supplements you take. Ensure that you are not putting your body -- and specifically your heart -- under too much stress as you strive to lose weight.

Most fad diets produce temporary results since you cannot continue on them for long periods of time. When you quit and return to your old eating habits, the weight often comes back, with the possibility of adding more.

## Best Diets Overall

U.S. News evaluated and ranked 25 diets with input from a panel of health experts. To be top-rated, a diet had to be relatively easy to follow, nutritious, safe, and effective for weight loss and against diabetes and heart disease. The government-endorsed Dietary Approaches to Stop Hypertension (DASH) snagged the top spot. The top five diets, in order, are DASH, TLC, Mayo Clinic, Mediterranean, and Weight Watchers.



**Why do "fad diets" often fail?**



**Why are DASH, TLC, and Weight Watchers considered to be safe and healthy "diets"?**

# BMI: Body Mass Index

A good way to assess your weight is to calculate your body mass index (BMI). Your BMI estimates whether you are at a healthy weight. Being overweight puts strain on your heart and can lead to serious health problems. These problems include [type 2 diabetes](#), heart disease, high blood pressure, [sleep apnea](#), varicose veins, and other chronic conditions. More than 300,000 lives could be saved in the United States each year if everyone maintained a healthy weight!

## HOW TO DETERMINE YOUR BMI

Your BMI estimates how much you should weigh based on your height. Here are the steps to calculate it:

- Multiply your weight in pounds by 703.  $\text{_____} \times 703 = \text{_____}$
- Divide that answer by your height in inches.  $\text{_____} \div \text{_____} = \text{_____}$
- Divide that answer by your height in inches again.  $\text{_____} \div \text{_____} = \text{_____}$

For example, a woman who weighs 270 pounds and is 68 inches tall has a BMI of 41.0.

Use the chart below to see what category you fall into, and whether you need to be concerned about your weight.

BMI	CATEGORY
Below 18.5	Underweight
18.5 - 24.9	Healthy
25.0 - 29.9	Overweight
30.0 - 39.9	Obese
Over 40	Morbidly obese

**\*BMI is not always an accurate way to determine whether you need to lose weight, for example body builders; because muscle weighs more than fat, people that are unusually muscular may have a high BMI.**



Use this website to just input information to get your BMI:

<http://www.nhlbisupport.com/bmi/bmicalc.htm>



## Why Is Physical Activity Important?

Regular physical activity can produce long term health benefits. People of all ages, shapes, sizes, and abilities can benefit from being physically active. The more physical activity you do, the greater the health benefits.

### **Being physically active can help you:**

- Increase your chances of living longer
- Feel better about yourself
- Decrease your chances of becoming depressed
- Sleep well at night
- Move around more easily
- Have stronger muscles and bones
- Stay at or get to a healthy weight
- Be with friends or meet new people
- Enjoy yourself and have fun

### **When you are *not* physically active, you are more likely to:**

- Get heart disease
- Get type 2 diabetes
- Have high blood pressure
- Have high blood cholesterol
- Have a stroke

## Physical Fitness

**Physical activity** is any form of movement that causes your body to use energy.

**Physical fitness** is the ability to carry out daily tasks easily and have enough reserve energy to respond to unexpected demands.

### **Elements of Fitness**

**Cardio respiratory endurance** – the ability of the heart, lungs, and blood vessels to utilize and send fuel and oxygen to the body's tissues during long periods of moderate to vigorous activity

**Muscular strength** – the amount of force a muscle can exert

**Muscular endurance** – the ability of the muscles to perform physical tasks over a period of time without becoming fatigued

**Flexibility** – the ability to move a body part through a full range of motion

**Body composition** – the ratio of body fat to lean body tissue, including muscle, bone, water, and connective tissue such as ligaments, cartilage, and tendons

### **Skill Related Fitness Terms**

**Agility** – the ability to rapidly and accurately change the direction of the movement of the entire body in space

**Balance** – the maintenance of equilibrium while stationary or while moving

**Coordination** – the ability to use the senses with the body parts to perform motor tasks smoothly and accurately

**Power** – the ability to transfer energy into force at a fast rate

**Reaction Time** – the time elapses between stimulation and the beginning of reaction to that stimulation

# Improving Fitness

**\*Aerobic exercise** is all rhythmic activities that use large muscle groups for an extended period of time.

**\*Anaerobic exercise** is intense short burst activity in which the muscles work so hard that they produce energy without using oxygen.

## **\*The FITT Formula**

- **F** **Frequency**- how often you do the activity each week (3-4 times a week)
- **I** **Intensity**- how hard you work at the activity (target zone)
- **T** **Time/Duration** – how much time you devote to a session (aerobic goal is 20-30 minutes within your target zone) A zone is 2 numbers.
- **T** **Type** – which activities you select (For maximum health benefits from your workout routine, devote 75-80% of your workout time to aerobic activity and 20-25 % to anaerobic activity.)

**\*Resting Heart Rate** is the number of times your heart beats in one minute when you are not active. Let's sit quietly for a few minutes, and then take our resting heart rate. (Carotid and Radial)

Carotid Pulse \_\_\_\_\_

Radial Pulse \_\_\_\_\_

## **Questions for Physical Activity and Fitness:**

**1. What are the benefits of being physically active?**

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**2. List at least two activities you do for the following components of fitness:**

- Cardiorespiratory Endurance \_\_\_\_\_
- Muscular Strength \_\_\_\_\_
- Muscular Endurance \_\_\_\_\_
- Flexibility \_\_\_\_\_

**3. Why is lean mass a more important concept than the weight on a scale?**

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**4. What is the difference between aerobic and anaerobic exercise?**

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**5. What component of exercise would like to improve? How could you do this?**

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# Fitness and Health Calculations

## Finding Your Target Heart Range

1. Write your resting heart rate here (see pg. 100) \_\_\_\_\_
2. Subtract your age from 220 to find your maximum heart rate. (Example: If you are 16, your maximum heart rate will be  $220-16=204$ )
3. Subtract your resting heart rate from your maximum heart rate. (Example: Suppose that your resting heart rate is 66.  $204-66=138$ )
4. Multiply the number you arrived at in step 3 by 60% and again by 85%. Round to the nearest whole numbers. (Example:  $138 \times .60 = 83$ ;  $138 \times .85 = 117$ )
5. Add your resting heart rate to the numbers you arrived at in Step 4. (Example:  $83 + 66 = 149$ ;  $117 + 66 = 183$ ) The resting totals represent your target heart range (between 149 and 183)
  - **Maximum target heart rate** - Exercising above this rate can result in injury.
  - **Target heart range** - to safely build cardio endurance, keep your heart rate within this range.
  - **Minimum target heart rate**- Exercising below this rate will not build cardiorespiratory endurance.

## Basal Energy Expenditure: How many calories should you be consuming daily?

### Step 1 - Change your height to centimeters (cm):

- a. Convert your height to inches (ex. 5ft. 5 inches =65 inches, 6ft. = 72 inches)
- b. Multiply number of inches by 2.54  
\_\_\_\_\_ Inches x 2.54 = \_\_\_\_\_ cm

### Step 2 - Change your weight to kilograms (kg): You divide # of pounds you weigh by 2.2

$$\frac{\# \text{pounds}}{2.2} = \text{_____ kg}$$

### Step 3 - Female Formula

$$655 + (9.6 \times \text{weight in kg}) + (1.8 \times \text{height in cm}) - (4.7 \times \text{age}) = \# \text{ of calories needed daily}$$

### Step 4 - Male Formula

$$66 + (13.8 \times \text{weight in kg}) + (5 \times \text{height in cm}) - (6.8 \times \text{age}) = \# \text{ of calories needed daily}$$

### Take the answer from step 3 and multiply it by the % indicated in Step 4

(ex. If the # of calories needed in step 3 is 2000 calories, you would multiple it by 20% if you are sedentary.)  $2000 \times .20 = 400$  calories (Calculate sedentary, moderately active, and very active to see the difference in calories) Then choose your activity level answer to complete Step 5.

- +20% of your total if you are sedentary
- +35% of your total if you are moderately active
- +50% of your daily total if you are very active

### Step 5

Add the answer from steps 3 and 4. \_\_\_\_\_ (Daily Caloric Intake)  
(ex. Answer from step 3 (2000) plus the answer from step 4 (400) = 2,400 calories)

## Balance Your Calories In and Out

Physical activity and nutrition work together for better health. Being active increases the amount of calories burned. As people age their metabolism slows, so maintaining energy balance requires moving more and eating less.

<b>Moderate physical activities</b>	<b>1 hour calories burned</b>	<b>30 minutes calories burned</b>
Hiking	370	185
Yard work	330	165
Dancing	330	165
Golf (walking carrying clubs)	330	165
Walking (3.5 mph)	280	140
Weight training(light workout)	220	110
Bicycling(less than 10 mph)	290	145
<b>Vigorous physical activities</b>	<b>1 hour calories burned</b>	<b>30 minutes calories burned</b>
Jogging (5 mph)	590	295
Bicycling (more than 10 mph)	590	295
Swimming (slow free style laps)	510	255
Aerobics	480	240
Walking (4.5 mph)	460	230
Heavy yard work	440	220
Weight lifting(vigorous effort)	440	220
Basketball (vigorous)	440	220

**Note:** These calories burned are based on a 154 lb. male

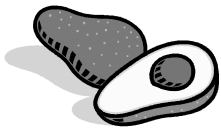
<b>Food</b>	<b>Amount</b>	<b>Calories</b>	<b>Activity needed to burn calories</b>
2' Chocolate Chip cookies	6	441	1 hour vigorous basketball
Sandwich cookies	6	286	
2 scoop ice cream cone	1	386	
Soft pretzel	1	389	
Bagel (5 ounces)	1	337	
Cream cheese	1 ounce	97	
Potato chips	1 ounce	152	
Hot dog with roll	1	314	
Cola (can)	12 ounces	136	



**What is meant by the phrase "balance your calories"?**



**Why is balancing calories important?**



## Nutrition/Fitness Review



1. Carbohydrates are nutrients that \_\_\_\_\_ for the body. \_\_\_\_\_ is the part of grains and plant food that cannot be digested and are important for a healthy digestive tract. \_\_\_\_\_ Carbohydrates are sugars that enter the blood stream quickly and should be limited in your diet.
2. \_\_\_\_\_ is a nutrient needed to build, repair and maintain body tissues. \_\_\_\_\_ are the building blocks that make up proteins. Vegetarians/Vegans can certainly get enough protein by eating a \_\_\_\_\_ of plant foods.
3. Saturated fats are found in \_\_\_\_\_. Trans fats are also called \_\_\_\_\_ or \_\_\_\_\_. Both types of these fats should be limited in your diet as they both contribute to heart disease.
4. \_\_\_\_\_ are nutrients that help chemical reactions take place in the body. Minerals are nutrients that \_\_\_\_\_. You need both of these in small quantities.
5. Physical fitness is \_\_\_\_\_. The elements of fitness include \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. F.I.T.T. stands for \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
6. Being able to read a nutrition label is important.
  - a. List 5 other names for sugar: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.
  - b. % Daily Values are based on a \_\_\_\_\_ calorie diet
  - c. How can you tell which ingredient is present in the largest amount?  
\_\_\_\_\_
7. Why do "fad diets" often fail? List 5 ways you can recognize a "fad diet"?
8. Why are the "DASH" Diet, "Mediterranean Diet" and "Weight Watchers Diet" considered to be among the best diets for life-long well-being?
9. What changes can you make in your diet and life to help you move more towards "optimal health" on the health continuum?

## Family Living

1. What is meant by the word "sexuality"?
2. What does the word "sexy" mean to you?
3. What do you feel the opposite gender needs to know about your gender?
4. Describe the ideal of the female gender. (The perfect woman)
5. Describe the ideal of the male gender. (The perfect man)
6. List any female stereotypes. Star (\*) any you believe to be true.
7. List any male stereotypes. Star (\*) any you believe to be true.



## Putting a Relationship Together

What makes for a healthy relationship? Take a couple of minutes to write down examples that describe each quality in the boxes below. Your examples may represent how you feel about the quality, or they may be actions you associate with it.

<b>Respect</b>	<b>Trust</b>	<b>Honesty</b>
<i>Likes me for who I am</i>	<i>Someone I can rely on</i>	<i>Tells me the truth</i>
<b>Accountability</b>		<b>Safety</b>
<i>Apologizes when wrong</i>		<i>I can speak my mind without being made fun of</i>

### Concepts

**Respect** is understanding, valuing, and supporting your own and another person's individuality.

**Accountability** is taking responsibility for your own thoughts, feelings, beliefs, and actions.

**Trust** is confidence that you can rely or depend on the other person.

**Safety** is freedom from emotional, physical, or mental harm.

**Honesty** is being truthful and genuine.



### Reflection

1. Which qualities are most important to you in your relationships?
2. Which of these do you bring to your relationships?
3. Which quality would you most like to work on?

# Healthy Relationships

## Think About It: The Main Attraction

What draws you to others and others to you? Look at the list of reasons people often mention when asked what they look for in a close friend or relationship. Check off the three most important reasons for you. For each reason, write down up to three qualities you look for. Then write down three of your qualities that you think others are drawn to in you.

✓	Reasons	Qualities I look for in others	Qualities others are drawn to in me
	Background	<b>Example:</b> <i>South American, Latino</i>	
	Intellect		<b>Example:</b> <i>Like to debate and question the status quo</i>
	Physical		
	Personality traits		
	Intellect		
	Background		
	Talents		
	Politics		
	Interests		

# Relationships



## Sexual Responsibility

Sexual responsibility is based on maturity, values and decision making. Some components of this responsibility include:

- Be prepared to accept any consequences of your actions
- Respect your partner's boundaries and remember your own boundaries
- Protect your health and the health of your partner
- Inform potential partners of any sexually transmitted diseases (communication)
- Consider your needs and the needs of your partner

## Love vs. Infatuation

**Love is a deep devotion or affection for another person.**

- Begins with friendship and grows stronger with time
- Partners feel secure and trust one another
- Partners accept weaknesses in each other and respect each other
- Partners remain individuals without depending on the relationship to feel worthwhile
- The relationship is a give and take
- Relationship augments all other parts of their lives

**Infatuation is a foolish or extravagant love or admiration.**

- Instant desire but no deep feelings
- A sense of uncertainty and insecurity, worry about the other losing interest
- Partners cannot admit weaknesses in each other, don't examine each other closely
- Partners depend on relationship to feel important, lacking self-confidence
- More aware of what the partner has to give them
- Relationship may be exhausting, with other parts of their lives not functioning well

## Characteristics of a Successful Relationship\*

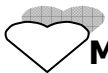
Commitment

Communication

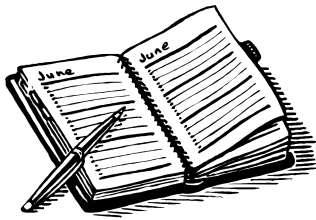
Compromise

Respect

\*compatibility, love, friendship, shared values/goals, shared responsibilities, mutual concern, and physical attraction, similar interests and backgrounds, etc.



**Make a list of 10 characteristics or qualities that are important to you in looking for a partner or mate. What do you look for in a friend? Are they similar qualities? Write a paragraph defining the difference between friendship and love relationships.**



## Dear Expert

For this assignment, separate into groups of 3 or 4 students. Your job, as the author of an advice column in a popular magazine, is to formulate a response to one of the following letters. Use all the information regarding sexual responsibility and relationships you have learned in class. On a separate sheet of paper give a thoughtful and complete answer. Be prepared to share (and defend) your letter with the class.

1. Dear Expert,

I just broke up with my boyfriend, Charlie, my high school sweetheart, when I discovered I was pregnant. Charlie said he wanted nothing to do with either me or the baby. I have been so lonely since I stopped seeing Charlie and I'm happy I am pregnant. I am looking forward to having someone of my own to love me. I plan to live at home and hope my mom will quit her job to care for my baby while I finish my last year of high school. I haven't talked to her about that part yet. What do you think?

Mom-To-Be

2. Dear Expert,

I was just released from the hospital for the third time in the past year. My boyfriend, Alan, beat me up again, this time breaking two ribs. Alan doesn't drink or do drugs, but has a quick temper. Our relationship was really good until he broke my nose about 8 months ago. When I got out of the hospital, he was waiting for me with flowers and an apology. Things were great for a while; I moved in with him. A few weeks later, he lost his temper again and broke my arm. He loves me very much and I love him. He doesn't mean for this to happen. I have to lie to the nurses and doctors because they are very suspicious. They ask me lots of questions about Alan, but I cover for him. Help me fix what went wrong.

Hurting

3. Dear Expert,

I have been going out with my boyfriend, Pete, for about a year now. We just recently started having sex. The problem is I feel like that is all he wants to do anymore. We used to go out and do lots of fun things together but that seems to have all stopped. Whenever we are together, we are doing it. Now he hangs out with his buddies and only calls me when he wants to have sex. I love him and don't want to lose him, but I am not happy the way things stand. I am not sure what to do.

Feeling Used

4. Dear Expert,

I have been dating this girl Jessie for about nine months. She is a wonderful girl and is someone I can see myself spending the rest of my life with. We have not had sex yet, but I have decided that I am now ready to start having a sexual relationship with her. The only problem is I have genital herpes, and do not know how to tell her. I am really scared to do this. I know it is my responsibility to tell her. I just don't know how to do it.

Need Advice

# Sexual Harassment

## How Can I Tell If I'm Saying and Doing the Right Thing or the Wrong Thing?

Sexual harassment is defined as behavior or comments of a sexual nature which are unwelcome and make the person feel uncomfortable.

It is important to remember that sexual harassment can be ambiguous—you may think you are giving a compliment and the receiver may think it is harassment. The law says that it is not the intent; it's the impact of the comment or behavior. Whether harassment had occurred is truly in the eye of the beholder. So when you are not sure about your behavior, ask yourself these questions:

1. Would I want my comments/behaviors to appear in the newspaper or on TV so my family and friends would know about them?
2. Is this something I would say or do if my mother/father, girlfriend/boyfriend, sister/brother, wife/husband/partner were present?
3. Is this something I would want someone else to say or do to my mother/father, girlfriend/boyfriend, sister/brother, wife/husband/partner?
4. Is this something I would say or do if the other person's significant other (wife, husband, partner, boyfriend, girlfriend) were present?
5. Is there a difference in power between me and the other person? (Power can be based on one's position, social status, size, etc.)

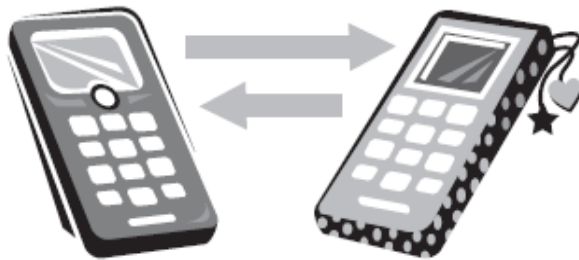
## Love Shouldn't Hurt

### **33% of Teenagers Experience Physical Abuse in a Relationship**

Violence in relationships is not just an adult problem. Abuse occurs in many teen relationships. Dating violence is when physical, emotional, and/or sexual force is used by one person to control or dominate the other.

- Do you feel confused about your relationship?
- Does your partner lose his/her temper suddenly over small things?
- Is your partner jealous or possessive towards you?
- Does your partner yell or swear at you when you are alone or with friends?
- Does your partner pressure you to do things that don't feel comfortable to you?
- Does your partner blame you for his/her problems?
- Does your partner abuse alcohol or illegal drugs?
- Have you been slapped, kicked, shoved, or punched by your partner?
- Have your family or friends warned you about your partner or told you that they are worried about your safety?
- Does your partner check up on you, call you constantly, want to know where you have been or whom you have been with and why, whenever you have gone out?

# SEXTING: HOW TEENS CAN STAY SAFE



**Sexting is sending sexually explicit text or photographs via mobile devices. Sometimes teens share the photographs voluntarily, but at other times teens may be coerced into taking or sending the photographs. Once the photos are sent, some kids use them to bully, harass, intimidate, or embarrass victims online or via mobile devices.**

Sexting between minors is a felony and can have serious legal consequences. You could be charged with a crime. If convicted you could be labeled as a sex offender for the rest of your life.

Think before you "sext." Follow these important tips to keep safe:

- Never send or post sexually provocative pictures. Once the picture is out there, it will never go away. Don't risk your future college or employment hopes and your reputation with family, friends, teachers, and neighbors who could see the photos.
- Remember that healthy relationships should be based on mutual respect, not just sexual attraction. Sometimes, boyfriends and girlfriends share intimate photos with each other. Since one photo can reach thousands via websites and mobile devices, make sure you never share these photos with friends and classmates.
- Refuse to be pressured into sending explicit pictures. If someone threatens you or tries to force you to send a picture, talk to an adult you trust.
- Never open or forward explicit pictures from people you don't know. An online friend that you've never met or don't know in person is really a stranger.
- Use caution with devices like computer webcams. Always turn them off or close the lens to prevent prying eyes from seeing too much.
- If someone keeps sending you explicit pictures, tell a parent or trusted adult. You need to understand that the adult may have to involve law enforcement or school administrators to help resolve the matter and keep you from getting into a more serious situation.
- Talk to your friends about sexting. If someone you know is sharing explicit pictures, encourage them to stop before they get into trouble. If necessary, tell a parent or other trusted adult. Good friends try to keep each other safe.



**National Crime Prevention Council**  
2345 Crystal Drive • Suite 500 • Arlington, VA 22202  
202-466-6272 • [www.ncpc.org](http://www.ncpc.org)

# What's Respect?

Respect is a pattern of behavior that's found in healthy relationships. People who respect each other:

- Talk honestly and freely
- Make decisions together
- Trust and support each other
- Value each other's independence
- Affirm each other
- Encourage each other to spend time with friends and family
- Have the freedom to be themselves

You have a choice about the kind of relationships you want to have with a boyfriend or girlfriend. You can learn to have a healthy relationship and be loved and treated well by someone you care about. When you give respect to others, they will feel good about themselves and the relationship. They'll give you respect in return, which will make you feel great. Give it to get it.

## Dating Bill of Rights

### **Dating Rights:**

I have the right:

- To be treated with respect always
- To be in a healthy relationship
- To be not be abused-physically, sexually, or emotionally
- To keep my body, feelings, beliefs, and property to myself
- To have friends and activities apart from my boyfriend or girlfriend
- To set limits and values
- To say no
- To feel safe in the relationship
- To be treated as an equal
- To feel comfortable being myself
- To leave a relationship

### **Dating Responsibilities:**

I have the responsibility:

- To determine my limits and values
- To respect my boyfriend's or girlfriend's limits, values, feelings and beliefs
- To refuse to abuse – physically, sexually or emotionally
- To be considerate
- To communicate clearly and honestly
- To give my boyfriend or girlfriend space to be his or her own person
- To not exert power or control in the relationship
- To compromise when needed
- To admit to being wrong when appropriate
- To ask for help from friends, family and trusted adults

# Puberty

## What is puberty?

Puberty is period of sexual development during which time a young person begins to sexually mature and become able to produce offspring.

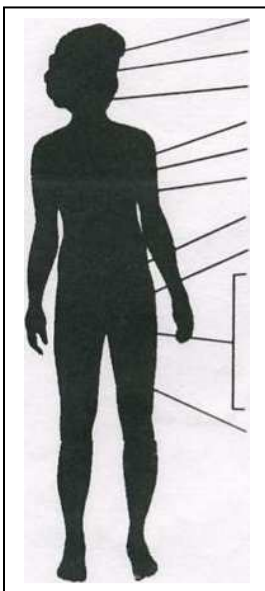
In girls, puberty may start as early as 6 or 7 years of age, but it usually starts around 11 years of age. This represents a change in how doctors think about normal puberty. Until recently, puberty that started at 8 years of age or later in girls was considered normal. In boys, though, the age considered normal for the beginning of puberty has not changed. In boys, puberty begins around 12 years as age, but may start as early as 9 years of age. This is a process that goes on for several years. Most girls are physically mature by about 14 years of age. Boys mature at about 15 or 16.

## Emotional Changes during puberty include:

- Mood swings
- Focus changes from family outward
- Sudden attraction to others
- Confusion- feelings of being lost, not fitting in, insecurity
- Behavior to prove yourself, etc.
- More concern about body image, looks and clothes

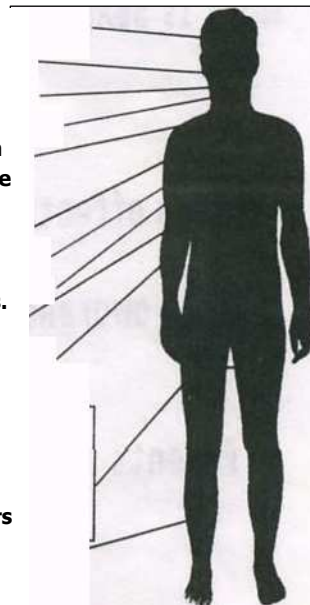
## Mental/Cognitive Changes during puberty include:

- More ability for complex thought
- A stronger sense of right and wrong
- Better able to express feeling through talking



**Growth spurt occurs**  
**No change in hairline**  
**Acne appears**  
**Permanent teeth all in**  
**Underarm hair appears**  
**Perspiration increases**  
**Breasts develop**  
**Waistline narrows**  
**Hips widen**  
**Uterus and ovaries enlarge**  
**Ovulation occurs**  
**Menstruation begins**  
**Pubic hair appears**  
**External genitals enlarge**

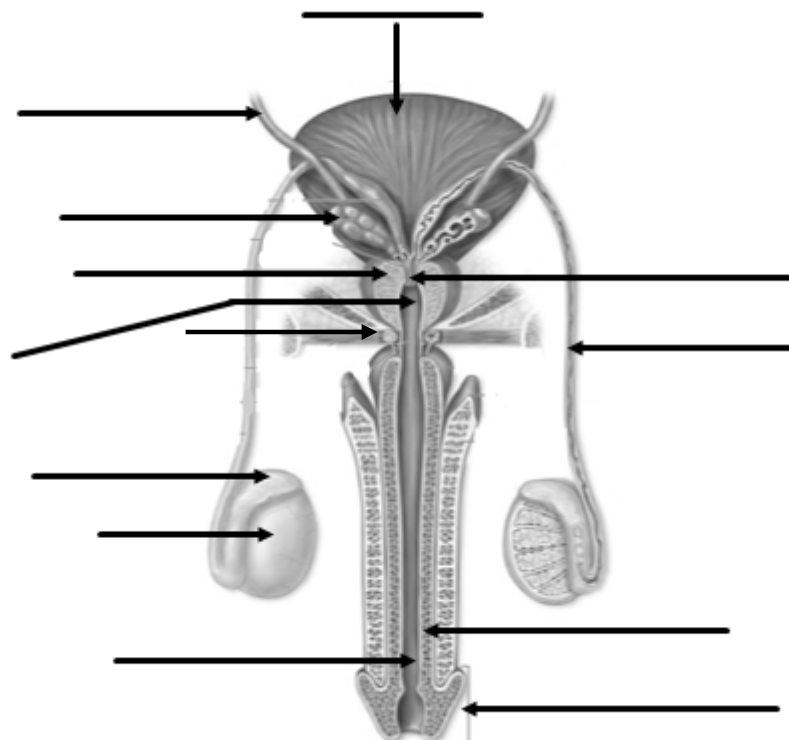
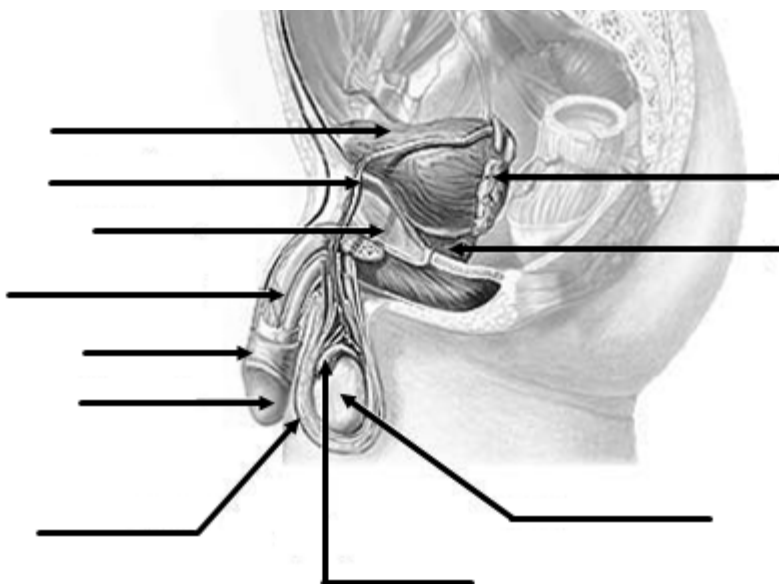
**Growth spurt occurs**  
**Hairline recession begins**  
**Acne appears**  
**Facial hair appears**  
**Permanent teeth all in**  
**Larynx enlarges, voice deepens**  
**Shoulders broaden**  
**Axillary hair appears**  
**Perspiration increases.**  
**Muscles develop**  
**Some breast enlargement may occur**  
**Pubic hair appears**  
**External genitals enlarge**  
**First ejaculation occurs**  
**Sperm production begins**  
**Long bone growth**





# The Male Reproductive System

The internal structures of the male reproductive system play a role in the delivery of sperm.



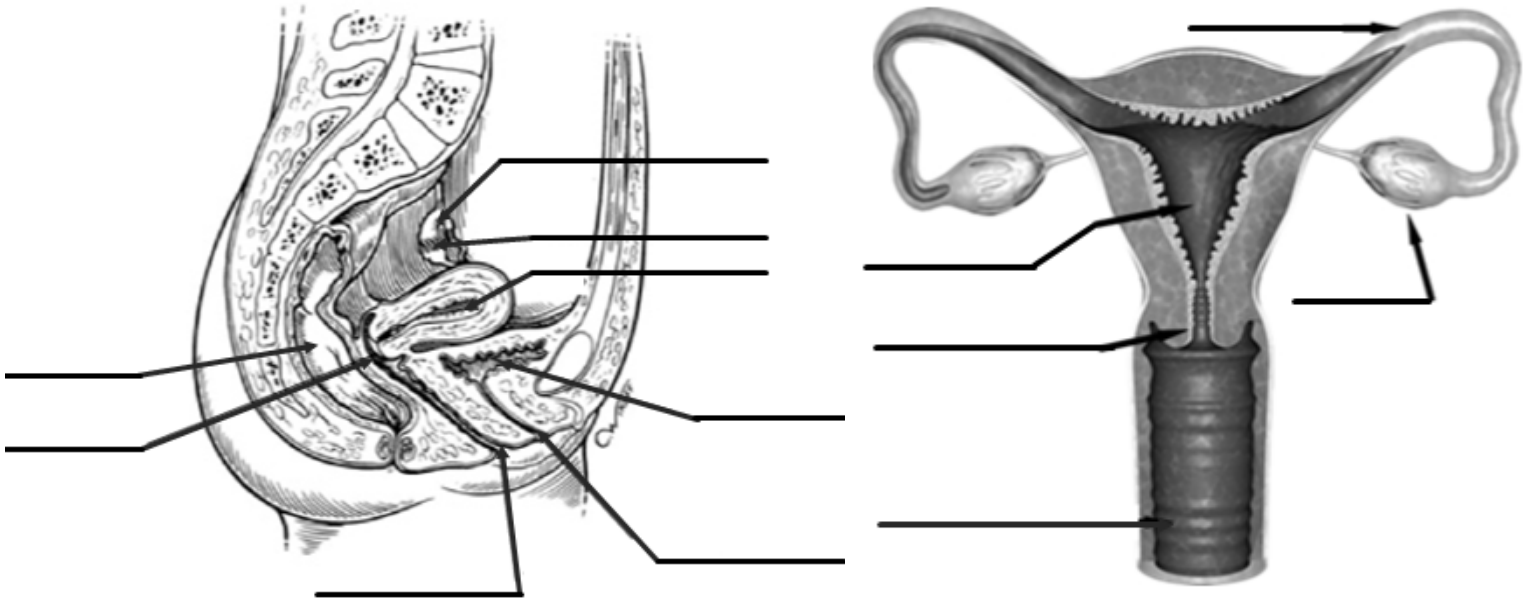

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## Fill in the correct term.

- \_\_\_\_\_ : tubes that transport sperm from testes toward urethra
- \_\_\_\_\_ : area behind testes where sperm mature
- \_\_\_\_\_ : gland that produces 30% of the seminal fluid (semen)
- \_\_\_\_\_ : (2) small structures at the base of the bladder that produce 70% of the seminal fluid
- \_\_\_\_\_ : connection between vas deferens and urethra
- \_\_\_\_\_ : (2) pea size organs that secrete a clear alkaline fluid during sexual excitement
- \_\_\_\_\_ : passage for urine and semen to the external environment
- \_\_\_\_\_ : skin fold covering the end of the penis
- \_\_\_\_\_ : loose pouch of skin containing sperm producing organs (testes)
- \_\_\_\_\_ : external male sex organ
- \_\_\_\_\_ : (2 testicles) ovoid glands which create sperm and secrete male hormone, testosterone

## The Female Reproductive System

The female reproductive system produces sex cells called ova and provides a place for a fertilized ovum to grow.



---

### Fill in the correct term.

\_\_\_\_\_ : both the Birth Canal and the structure that receives the penis during intercourse

\_\_\_\_\_ : connects the urinary bladder to the outside

\_\_\_\_\_ : the entrance to the uterus at the internal end of the vagina

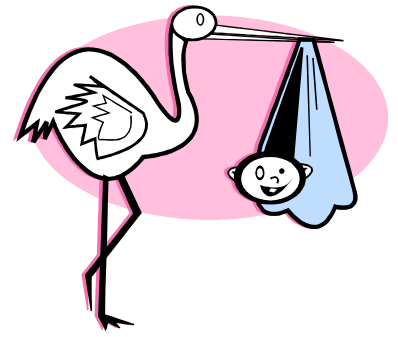
\_\_\_\_\_ : inside layer of the uterus, rich in blood supply, that nourishes a fertilized egg

\_\_\_\_\_ : (Womb) hollow muscular structure that holds the fetus during pregnancy

\_\_\_\_\_ : (2) produce ova (egg cells) and female hormones, estrogen and progesterone

\_\_\_\_\_ : (2) muscular tunnel that transports ova to the uterus; where fertilization of an egg occurs

# Conception and Childbirth



## I Conception or Fertilization:

- The union of the sperm and the egg.
- Heredity is determined ( passing of traits)
- 23 pairs of chromosomes are developing
- Every ovum (egg) has the X chromosome
- Sperm can be either X or Y (Y containing the male characteristics)  
i.e.: XX = female child XY = male child

## II How Pregnancy is determined?

- First sign may be the absence of the menstrual period
- Confirmed by a pregnancy test conducted by a medical professional.
- Breasts are tender, fatigue, change in appetite and morning sickness

## III Prenatal Care:

- Routine medical examination
- Proper nutrition and exercise
- Rest and relaxation
- Avoidance of drugs and other risk behaviors \*(FAS)
- Proper education
- Folic acid is a B vitamin that can help prevent birth defects of the brain and spinal cord called neural tubal defects. Folic acid works best if taken before conception and during early pregnancy.



## IV What to know about child birth:

**Labor:** muscular contractions of the uterus

\*The amniotic sac may rupture (water breaking)

### There are three stages of childbirth:

Stage 1: Dilation of the cervix

This is the longest stage of childbirth

The cervix opens 8-10 centimeters

(Wide enough for the baby to fit through)

Stage 2: Delivery of the baby

Crowning is the appearance of the baby's head in the birth canal

The mother can begin to push

Once the baby is out, the umbilical cord is cut.

Stage 3: Delivery of the Placenta

The afterbirth is the placenta that is expelled after delivery



# Parenting

- Parenthood is 24 hours a day, 7 days a week for at least 18 years.
- Needs of the child must come first.
- 10% of women aged 15-19 get pregnant each year.
- More than 750,000 teenagers become pregnant each year, and about 445,000 give birth.
- The teenage birth rate increased in 2006 and 2007. Between 2005 and 2007, the rate rose 5 percent (from 41 to 42.5 per 1,000 women). This increase follows a 14-year decline between 1991 and 2005, when the rate fell by one-third (from 62 to 41 per 1,000 women). In 2007, about 4 in 100 teenage girls had a baby.
- Teen mothers are more likely than mothers over age 20 to give birth prematurely (before 37 completed weeks of pregnancy). Between 2003 and 2005, preterm birth rates averaged 14.5 percent for women under age 20 compared to 11.9 percent for women ages 20 to 29. Babies born prematurely face an increased risk of newborn health problems, long-term disabilities and even death.
- 1.5% of teen moms get a college degree by age 30.
- 25% of teen moms have a second child within 2 years of the first.
- Health risks posed to teen mother and child as well as social issues.
- Drugs, alcohol and tobacco all affect the fetus and may cause birth defects, addiction, brain damage, miscarriage, etc.
- No license required to have a child. No formal training required. Most important job in the world, least preparation given.
- Parenting styles may differ and can strain a marriage/relationship.
- Cost of raising a child is tremendous. (From \$241,080- \$301,970 from birth to age 18.)
- Social life is drastically reduced for years.
- Many items are necessary to care for a baby.

## **Nine Steps to More Effective Parenting**

### **1. Boosting Your Child's Self-Esteem**

Kids start developing their sense of self as babies when they see themselves through their parents' eyes. Your tone of voice, your body language, and your every expression are absorbed by your kids. Your words and actions as a parent affect their developing self-esteem more than anything else. Choose your words carefully and be compassionate. Let your kids know that everyone makes mistakes and that you still love them, even when you don't love their behavior.

### **2. Catch Kids Being Good**

Make a point of finding something to praise every day. Be generous with rewards — your love, hugs, and compliments can work wonders and are often reward enough. Soon you will find you are "growing" more of the behavior you would like to see.

### **3. Set Limits and Be Consistent With Your Discipline**

Discipline is necessary in every household. The goal of discipline is to help kids choose acceptable behaviors and learn self-control. They may test the limits you establish for them, but they need those limits to grow into responsible adults. Establishing house rules helps kids understand your expectations and develop self-control. Being consistent teaches what you expect.

### **4. Make Time for Your Kids**

Kids who aren't getting the attention they want from their parents often act out or misbehave because they're sure to be noticed that way. Many parents find it rewarding to schedule together time with their kids. Adolescents seem to need less undivided attention from their parents than younger kids. Because there are fewer windows of opportunity for parents and teens to get together, parents should do their best to be available when their teen does express a desire to talk or participate in family activities.

### **5. Be a Good Role Model**

Young kids learn a lot about how to act by watching their parents. The younger they are, the more cues they take from you. Studies have shown that children who hit usually have a role model for aggression at home. Model the traits you wish to see in your kids. Above all, treat your kids the way you expect other people to treat you.

### **6. Make Communication a Priority**

Parents who reason with their kids allow them to understand and learn in a nonjudgmental way. Make your expectations clear. If there is a problem, describe it, express your feelings, and invite your child to work on a solution with you. Be sure to include consequences. Make suggestions and offer choices. Be open to your child's suggestions as well. Negotiate. Kids who participate in decisions are more motivated to carry them out.

### **7. Be Flexible and Willing to Adjust Your Parenting Style**

As your child changes, you'll gradually have to change your parenting style. Chances are, what works with your child now won't work as well in a year or two. Teens tend to look less to their parents and more to their peers for role models. But continue to provide guidance, encouragement, and appropriate discipline while allowing your teen to earn more independence. And seize every available moment to make a connection!

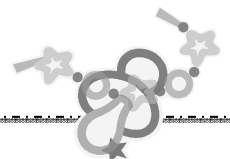
### **8. Show That Your Love Is Unconditional**

As a parent, you're responsible for correcting and guiding your kids. But how you express your corrective guidance makes all the difference in how a child receives it. When you have to confront your child, avoid blaming, criticizing, or fault-finding, which undermine self-esteem and can lead to resentment. Instead, strive to nurture and encourage, even when disciplining your kids. Make sure they know that although you want and expect better next time, your love is there no matter what.

### **9. Know Your Own Needs and Limitations as a Parent**

Face it — you are an imperfect parent. You have strengths and weaknesses as a family leader. Recognize your abilities — "I am loving and dedicated." Vow to work on your weaknesses — "I need to be more consistent with discipline"

*Reviewed by: Steven Dowshen, MD  
Date reviewed: January 2015*



## Parent for a Day

Now that you have had a chance to think about some of the situations and pressures that parents have to face, you may be better able to understand their reactions. Try putting yourself in the place of a parent of a teenage son or daughter. Choose a partner and decide who will be the parent and who will be the teenager. Then pick one of the following situations to role play for the class.

1. Your 13-year-old daughter informs you that she wants to dye her hair pink to be like her friends.
2. Your 17-year-old son went to a party. He was supposed to be home no later than 1:00am. He comes home drunk at 4:00am.
3. Your 14-year-old daughter wants to spend a weekend at a cabin with her girlfriends but no parents or other adults will be chaperoning. She tells you that all her friends' parents said they could go.
4. Your 18-year-old son informs you that he wants to buy a motorcycle.
5. Your 17-year-old son wants to try out for the football team, but his grades are lower than you think they should be.
6. Your 18-year-old daughter wants to take a part-time job after school. Taking it will mean that she will not get home until about 11:00pm every weeknight.
7. Your 16-year-old daughter has a boyfriend you do not like. She wants to invite him on a family outing for the weekend.
8. Your 13-year-old son and some of his friends have formed a rock band. They want to practice at your home twice a week.
9. Your 17-year-old daughter has informed you that she and her boyfriend are engaged. You were not aware that her relationship was that serious and are concerned about the year of school she needs to complete.
10. You smell marijuana smoke coming from your 14-year-old son's room, where he and two friends are listening to music.

# Parent Interview

Please interview any parent to get their answers to the following questions.

## Questions

1. What advice would you give to someone considering whether or not to become a parent?
2. When you first became a parent, what kinds of changes were required in your life?
3. What was the most difficult adjustment you had to make as a result of becoming a parent?
4. What was the least difficult adjustment you had to make as a result of becoming a parent?
5. What do you think is the most rewarding part of being a parent?
6. What do you think is the most difficult part of being a parent?
7. Were you surprised by any responsibilities of the parent role? If so, which ones?
8. What do you think are the most important personality traits a parent should display?
9. What do you think is the most important thing a parent can do when raising children?
10. What helped you the most in preparing to be a parent?

# Family Living Review

1. Sexual responsibility includes (list three):
2. What are four characteristics of a successful relationship?
3. Sexual harassment is defined as:
4. Do you agree or disagree with the "Dating Bill of Rights"? Why or why not?
5. What is puberty?
6. The part of the male reproductive system that produces sperm or testosterone is the \_\_\_\_\_. The \_\_\_\_\_ regulates the temperature of the testes. The three glands that make up a majority of the semen are: \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
7. The part of the female reproductive system that produces eggs(ova) and estrogen/progesterone are the \_\_\_\_\_. The \_\_\_\_\_ is where the fetus grows and develops. The \_\_\_\_\_ is the lining of the uterus that is shed during menstruation and is where the egg implants during pregnancy.
8. What is conception and what happens at conception?
9. Why is folic acid important for a pregnant female?
10. What are the three stages of childbirth?

## Health Education and the World Wide Web

There are many websites that give "health" information. You have to be able to judge the quality of that information to determine if it reliable, up to date and valuable. Websites that have .gov or .edu extensions are usually considered to be reliable. In addition you need to answer the following questions to determine if the website will be beneficial.

- Who authored the web site? Are they an expert in that field?
- What is the purpose of the web site? (Do they sell nutritional products, etc.?)
- When was the site written or last updated? (Is it current?)
- Does the web site have .edu, .gov or .org? (these are educational, government web sites or organization web sites; remember .com is a commercial web site) (.int is an international website e.g. [www.who.int](http://www.who.int); World Health Organization)
- Is the information useful for my purpose?

After you have answered the above questions; you want to double check the information you obtain by comparing it to other reliable and current web sites. If you are reading about cancer treatment; information about treatment that is published has already been through the "clinical trial" period. For current government sponsored "clinical trials" you can go to Medlineplus.gov.

If you are looking for an organization that can provide onsite information and assistance please use <https://211longisland.communityos.org/cms/>. This is a compilation of "health related" and other agencies in Nassau and Suffolk counties.

***Question: When researching a health topic which website extensions are considered to be the most reliable?***

The following list of web sites will help you start your "health" research. This is not a complete list; however, it will link you to many reliable sites.

[www.medlineplus.gov](http://www.medlineplus.gov)  
[www.healthfinder.gov](http://www.healthfinder.gov)  
[www.who.int](http://www.who.int) or [www.who.org](http://www.who.org)  
[www.cdc.gov](http://www.cdc.gov)  
[www.health.state.ny.us](http://www.health.state.ny.us)  
[www.kidshealth.org](http://www.kidshealth.org)  
[www.discovery.com](http://www.discovery.com)  
[www.nih.gov](http://www.nih.gov)  
[www.health.org](http://www.health.org)  
[www.wedmd.com](http://www.wedmd.com)  
[www.heart.org](http://www.heart.org)

[www.cancer.org](http://www.cancer.org)  
[www.diabetes.org](http://www.diabetes.org)  
[www.fda.gov](http://www.fda.gov)  
[www.lungusa.org](http://www.lungusa.org)  
[www.4women.gov](http://www.4women.gov)  
[www.girlshealth.gov](http://www.girlshealth.gov)  
[www.hhs.gov](http://www.hhs.gov)  
[www.noah-health.org](http://www.noah-health.org)  
[www.choosemyplate.gov](http://www.choosemyplate.gov)  
<http://themint.org>  
<https://211longisland.communityos.org/cms/>



# Medical Professionals

Generalists include both [medical doctors \(MDs\)](#) and [doctors of osteopathic medicine \(DOs\)](#). These professionals usually specialize in family practice or internal medicine.

- Specialists who are frequently sought directly by women for general primary care needs include the following:
  - OB/GYNs are physicians who specialize in obstetrics and gynecology, including well women's health care and prenatal care.
  - [Nurse practitioners \(NPs\)](#) may be prepared in programs specific to women's health care including common gynecological concerns, routine health maintenance and screenings (such as a [Pap smear](#)), and family planning
- Registered nurses (RNs) have graduated from a nursing program, have passed state board examinations, and are licensed by the state.
- Licensed practical nurses (LPNs) are state-licensed caregivers who have been trained to care for the sick.
- Advanced practice nurses have education and clinical experience beyond the basic training and licensing required of all RNs:
  - [Nurse practitioners \(NPs\)](#) are RNs with graduate training in primary care. The profession includes family (FNP), pediatric (PNP), adult (ANP), and geriatric (GNP) specialties. In some states NPs can prescribe medications.
  - Clinical nurse specialists (CNSs) are RNs who have graduate training in a specialized clinical field such as cardiac, psychiatric, or community health.
  - [Certified nurse midwives \(CNMs\)](#) are RNs with graduate training in women's health care needs, including prenatal, labor and delivery, and postpartum care.
  - Certified registered nurse anesthetists (CRNAs) are RNs with graduate training in the field of anesthesia.
- A [physician assistant \(PA\)](#) is trained in the family practice model for a primary care role.

## SPECIALTY CARE

Common specialty areas to which the patient is typically referred by the primary care provider:

- Anesthesiology -- anesthesia, either general or spinal block for surgeries and some forms of pain control
- Cardiology -- heart disorders
- Dermatology -- skin disorders
- Endocrinology -- hormonal and metabolic disorders, including [diabetes](#)

- Gastroenterology -- digestive system disorders
- General surgery -- common surgeries involving any part of the body
- Gynecology/obstetrics -- pregnancy (normal or problematic) and women's reproductive tract disorders
- Immunology -- disorders of the immune system and [allergies](#)
- Infectious disease -- infections affecting the tissues of any body system
- Nephrology -- [kidney disorders](#)
- Neurology -- nervous system disorders
- Oncology -- [cancer](#) and some other diseases that resist treatment
- Ophthalmology -- eye disorders and surgery
- Orthopedics -- bone and connective tissue disorders
- Otorhinolaryngology -- ear, nose, and throat (ENT) disorders
- Physical and rehabilitative medicine -- coordinate return to optimal functioning in individuals with musculoskeletal and neurological disorders (such as low back injury, spinal cord injuries, and [stroke](#))
- Psychiatry -- emotional or mental disorders
- Pulmonary (lung) -- respiratory tract disorders
- Radiology -- [X-rays](#) and related procedures (such as [ultrasound](#), [CT](#), and [MRI](#))
- Urology -- disorders of the male reproductive and urinary tracts and the female urinary tract

1. A person has a mole that has changed shape and color. They go to their primary medical doctor. Their medical doctor recommends a specialist. To which specialist will the primary doctor likely refer his patient?

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2. A female thinks she is expecting her first child... which kind of doctor should she see?

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3. A person thinks they may be suffering from depression. Which health care profession should they make an appointment to see?

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## Describe the role of each specialty.

Anesthesiology:

Cardiology:

Dermatology:

Endocrinology:

Gastroenterology:

Gynecology/obstetrics:

Nephrology:

Neurology:

Oncology:

Ophthalmology:

Orthopedics:

Psychiatry:

Radiology:

Urology:

Nurse practitioner:

Certified nurse midwives:

Physician assistant:

Registered Nurse:

Licensed practical nurses:

# Health Education Final Exam Review

## **Introduction and Mental Health**

1. Define:

*Distress*

*Eustress*

*Psychiatrist*

*Psychologist*

*Mental illness*

*Bipolar disorder*

*Self-Image*

*Health Continuum*

2. List five positive coping skills to reduce stress:

3. Draw and label the three sides of the health triangle. Why is it important that the triangle is represented by an equilateral triangle?

4. List three ways to improve your self-esteem.

5. \_\_\_\_\_ refers to the ideas, beliefs and attitudes about what is important to you.

6. List two contributing factors for eating disorders:

7. List 4 attributes of a mentally healthy person:

8. Which of Covey's 7 habits best relates to healthy and effective communication? (write it out not the #)

**I. Nutrition**

<b>Nutrient</b>	<b>Function</b>	<b>Sources</b>
1. Carbohydrates		
2. Fats		
3. Protein		

4. On a food label how can you tell which ingredient is in the largest quantity?

5. Define:

*Calorie:*

*Fiber:*

*Sodium: (where does most of the sodium come from in our S.A.D. diet?)*

*Organic:*

*Fad diet:*

*Partially hydrogenated oil:*

6. Recommended physical activity level for children and teens from the CDC is:

7. According to [www.choosemyplate.gov](http://www.choosemyplate.gov) the healthy plate guidelines the largest area of the plate should be filled with:

8. List 5 names for added sugar:

9. Folic acid is an important vitamin before and during pregnancy for women because it reduces the incidence of \_\_\_\_\_ in the unborn child.

## II. Disease Unit

1. Define:

*Communicable disease:*

*Non communicable disease:*

*Antibiotics:*

*Cancer:*

*Biopsy:*

*Carcinogen:*

*Metastasis (metastasize):*

*Pathogens:*

*Antibodies:*

*Vaccinations:*

*AIDS:*

*HIV:*

*Pap Smear:*

*Cholesterol:*

*Insulin:*

*Hypertension: (& outcomes)*

2. Fill in the chart

Disease/ add description	Symptoms	Prevention
Melanoma		
Heart Disease/heart attack		
Stroke		
Diabetes		

HIV/AIDS		
Lyme Disease		
Herpes		
Chlamydia/Gonorrhea		

3. What are the best things one can do to reduce the risk of contracting STIs? Which is the only that is 100% effective?
4. List five things an individual can do to increase the quality and quantity of their life?

5. Why have "life-style" illnesses (non-communicable diseases like heart disease and cancer) surpassed communicable diseases as the leading causes of death in the United States during the past 100 years? List 2 reasons.

6. Fill in the ABCD's (+E) for Melanoma.

A:

B:

C:

D:

E: evolving or emerging

7. There is now a vaccine to prevent what is thought to be 70% of all cervical cancer. The virus that this vaccine is preventing is HPV/Human Papilloma Virus. When a woman gets a gynecological exam the doctor will perform a test that checks for cellular changes on the cervix. This test is a \_\_\_\_\_.

8. Which 2 STIs often cause pain upon urination for a male? Why do females often not exhibit the same symptoms?

### III. Drug Unit

1. Define the following terms:

*Binge drinking:*

*Alcoholism:*

*Synergism:*

*Adulterant:*

*Tolerance:*

*Withdrawal:*

*THC:*

*Euphoria:*

2. What narcotic do current users of heroin often use /become addicted to before they switch to heroin?
3. What does a BAC of .08% indicate? Can a person be arrested if they are operating an automobile?
4. List 5 diseases that smokers increase their risk or are more likely to suffer from:
5. List two effects that can happen when an individual uses hallucinogenic drugs like LSD.
6. What effects can alcohol have on the body?

Short term:

Long Term:

7. Alcohol is broken down /oxidized by the \_\_\_\_\_. Only \_\_\_\_\_ will help an intoxicated person "sober up". The average amount of time it takes to oxidize (break down) one drink is \_\_\_\_\_hour(s).
8. Alcoholism is a disease where the person is unable to control their drinking. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines alcoholism (or alcohol dependence) as a chronic disease with symptoms that include:
  - A. Craving
  - B.
  - C.
  - D. Tolerance



#### IV. Family Living

1. List the function for each of the following and indicate male, female or both.

Reproductive organ/part	Function	Male	Female	Both
Ovaries				
Testes				
Urethra				
Cervix				
Prostate Gland				
Seminal Vesicles				
Uterus				
Endometrium				
Fallopian Tubes				

2. List three components of a healthy relationship.

3. Define:

*Puberty*

*Abstinence*

*Sexual Harassment*

4. List two characteristics of sexual responsibility.

5. What are the attributes of effective parents?

6. What are the differences between identical and fraternal twins?

7. List two things that can have an influence on the female menstrual cycle.

8. Name 3 things that are important for healthy sperm production:

# Tattoos: Understand risks and precautions

By Mayo Clinic staff [www.mayoclinic.com](http://www.mayoclinic.com)

You could be the proud owner of a new tattoo in a matter of hours — but don't let the ease of getting tattoos stop you from making a thoughtful decision about permanent body art. Before you get a tattoo, make sure you know what's involved. Also, be certain that tattooing is the right decision for you.

## How tattoos are done

A tattoo is a permanent mark or design made on your skin with pigments inserted through pricks into the skin's top layer. Typically, the tattoo artist uses a hand-held machine that acts much like a sewing machine, with one or more needles piercing the skin repeatedly. With every puncture, the needles insert tiny ink droplets. The process — which is done without anesthetics — causes a small amount of bleeding and slight to potentially significant pain.

## Know the risks

Tattoos breach the skin, which means that skin infections and other complications are possible. Specific risks include:

- Allergic reactions. Tattoo dyes — especially red, green, yellow and blue dyes — can cause allergic skin reactions, such as an itchy rash at the tattoo site. This can occur even years after you get the tattoo.
- Skin infections. A skin infection — which might cause redness, swelling, pain and pus-like drainage — is possible after tattooing.
- Other skin problems. Sometimes bumps called granulomas form around tattoo ink. Tattooing can also lead to keloids — raised areas caused by an overgrowth of scar tissue.
- Blood-borne diseases. If the equipment used to create your tattoo is contaminated with infected blood, you can contract various blood-borne diseases — including tetanus, hepatitis B and hepatitis C.
- MRI complications. Rarely, tattoos or permanent makeup might cause swelling or burning in the affected areas during magnetic resonance imaging (MRI) exams. In some cases, tattoo pigments can interfere with the quality of the image — such as when a person who has permanent eyeliner has an MRI of the eye.
- \*\*\*Medication or other treatment — including possible removal of the tattoo — might be needed if you experience an allergic reaction to the tattoo ink or you develop an infection or other skin problem near a tattoo.

## Make sure you're ready

Before you get a tattoo, ask yourself whether you truly want to invest in permanent body art. If you're unsure or worried that you might regret it someday, give yourself more time to think about it. Don't allow yourself to be pressured into getting a tattoo, and don't get a tattoo if you're under the influence of alcohol or drugs.

If you decide to go ahead with the tattoo, choose the location of the tattoo carefully. Consider whether you want the tattoo to be visible or hidden under clothing. Also remember that weight gain — including pregnancy weight gain — might distort the tattoo or otherwise affect its appearance.

## Insist on safety precautions

To make sure your tattoo will be applied safely, answer these questions:

- Who does the tattooing? Don't attempt to tattoo yourself or allow an untrained friend to do the tattooing. Go to a reputable tattooing studio that employs only properly trained employees. Keep in mind that regulation requirements and licensing standards vary from state to state. Check with your city, county or state health department for information on local licensing and regulations.
- Does the tattoo artist wear gloves? Make sure the tattoo artist washes his or her hands and wears a fresh pair of protective gloves for each procedure.
- Does the tattoo artist use proper equipment? Make sure the tattoo artist removes the needle and tubes from sealed packages before your procedure begins. Any pigments, trays or containers should be unused as well.
- Does the tattoo artist sterilize nondisposable equipment? Make sure the tattoo artist uses a heat sterilization machine (autoclave) to sterilize all nondisposable equipment between customers. Instruments and supplies that can't be sterilized with an autoclave — including drawer handles, tables and sinks — should be disinfected with a commercial disinfectant or bleach solution after each use.

### **Take good care of your tattoo**

How you care for your new tattoo depends on the type and extent of work done. Typically, however, you'll need to:

- Remove the bandage after 24 hours. Apply an antibiotic ointment to the tattooed skin while it's healing.
- Keep the tattooed skin clean. Use plain soap and water and a gentle touch. While showering, avoid direct streams of water on the newly tattooed skin. Pat — don't rub — the area dry.
- Use moisturizer. Apply a mild moisturizer to the tattooed skin several times a day.
- Avoid sun exposure. Keep the tattooed area out of the sun for at least a few weeks.
- Avoid swimming. Stay out of pools, hot tubs, rivers, lakes and other bodies of water while your piercing is healing.
- Choose clothing carefully. Don't wear anything that might stick to the tattoo.
- Allow up to 2 weeks for healing. Don't pick at any scabs, which increases the risk of infection and can damage the design and cause scarring.

If you think your tattoo might be infected or you're concerned that your tattoo isn't healing properly, contact your doctor. If you're interested in tattoo removal, ask your dermatologist about laser surgery or other options for tattoo removal.

## **Tattoo Removal**

From <http://kidshealth.org>

A lot of people love their tattoos and keep them forever. But others decide a couple of years down the road that they really don't like that rose on their ankle or snake on their bicep anymore. Or maybe you broke up with your boyfriend or girlfriend and no longer want his or her initials on your stomach. What then?

Before you go just anywhere to get your tattoo removed, check with your doctor or contact the American Dermatological Association to find a reputable laser removal specialist in your area.

Although it's called tattoo removal, completely removing a tattoo can be difficult depending on how old the tattoo is, how big the tattoo is, and the types and colors of inks that were used. Removal of the entire tattoo is not always guaranteed. It's best to consult with a dermatologist who specializes in tattoo removal to get your

questions answered — such as whether anesthesia is used. The dermatologist can also give you a good idea of how much (if not all) of the tattoo can be removed.

Tattoo removal can be pretty expensive. Depending on factors like the size and design of the tattoo, removal can cost significantly more than the actual tattoo.

### **The Laser Removal Procedure**

Laser tattoo removal usually requires a number of visits, with each procedure lasting only a few minutes. Anesthesia may or may not be used. What happens is the laser sends short zaps of light through the top layers of your skin, with the laser's energy aimed at specific pigments in the tattoo. Those zapped pigments are then removed by your body's immune system.

Removing a tattoo by laser can be uncomfortable and can feel a lot like getting a tattoo. The entire process usually takes several months. Laser tattoo removal is usually effective for the most part, but there can be some side effects. The area can become infected or scarred, and it can also be susceptible to hyperpigmentation, which causes the area where your tattoo used to be to become darker than your normal skin, or hypopigmentation, which causes the area where your tattoo used to be to become lighter than your normal skin color.

### **So Is It Worth It?**

Is getting a tattoo worth the money and hassle? It's up to you. Some people really enjoy their tattoos and keep them for life, whereas others might regret that they acted on impulse and didn't think enough about it before they got one. Getting a tattoo is a big deal, especially because they're designed to be permanent.

If you've thought about it and decided you want a tattoo, make sure you do a little detective work and find a clean, safe, and professional tattoo shop. Also, remember that getting and maintaining a tattoo involves some responsibility — after you leave the tattoo shop, it's up to you to protect and treat it to prevent infections or other complications.

### **Questions:**

- 1. List 5 possible complications of getting a tattoo.**
- 2. How should a person select a place to get a tattoo? List 4 things to look for.**
- 3. If a person wants to get a tattoo removed; what procedure will they go through?**
- 4. Who should they see to get a tattoo removed?**
- 5. What possible reason(s) might cause a person to want to have a tattoo removed?**

# Online Safety

From: [www.kidshealth.org](http://www.kidshealth.org)

How could we live without the Internet? That's how most of us keep in touch with friends, find homework support, and research a cool place to visit, or find out the latest news.

But besides the millions of sites to visit and things to do, the Internet offers lots of ways to waste time — and even get into trouble. And just as in the non-cyber world, some people you encounter online might try to take advantage of you — financially or physically.

You've probably heard stories about people who get into trouble in chat rooms. Because users can easily remain anonymous, chat rooms often attract people who are interested in more than just chatting. They'll sometimes ask visitors for information about themselves, their families, or where they live — information that shouldn't be given away.

Usually, the people who request personal information like home addresses, phone numbers, and email addresses use this information to fill mailboxes and answering machines with advertisements. In some cases, though, predators may use this information to begin illegal or indecent relationships or to harm a person's or family's well-being.

Of course, the Internet is home to millions of places you can and should visit. Like an infinite library, the Web can take you to the ends of the earth with the information it contains.

You can use it to do research for school, find out what movie is playing near you (and whether people like it), check out a college you're thinking about, or find a job or volunteer opportunity. Almost anything you can think of has a website (or a thousand of them) about it. And it's not just websites — blogs, videos, and downloadable games await to connect you with other user and players.

The key is to protect yourself while online.

## Smart Surfing

First rule of smart surfing? Remain as anonymous as possible. That means keeping all private information private. Here are some examples of private information that you should never give out on the Internet:

- full name
- home address
- phone number
- Social Security number
- passwords
- names of family members
- credit card numbers

Most credible people and companies will never ask for this type of information online. So if someone does, it's a red flag that they may be up to no good. Think carefully before you create an email address or screen name. Web experts recommend that you use a combination of letters and numbers in both — and that you don't identify whether you're male or female.

In chat rooms, use a nickname that's different from your screen name. That way, if you ever find yourself in a conversation that makes you uncomfortable, you can exit without having to worry that someone knows your screen name and can track you down via email. Some people who hang out with their friends online set up private chat rooms where only they and the people they invite can enter to chat. Experts recommend that people keep online friendships in the virtual world. Meeting online friends face to face carries more risks than

other types of friendships because it's so easy for people to pretend to be something they're not when you can't see them or talk in person.

If you ever get involved in a chat room conversation that makes you feel uncomfortable or in danger for any reason, exit and tell a parent or other adult right away so they can report the incident. You can also report it to the website of the National Center for Missing and Exploited Children — they have a form for reporting this type of incident called CyberTipline. They will then see that the info is forwarded to law enforcement officials for investigation.

## **Cyber bullying**

It's not just strangers who can make you feel uncomfortable online. Cyber bullying refers to cruel or bullying messages sent to you online. These might be from former friends or other people you know. They can be irritating and, in some cases, even frightening.

If you get these bullying messages online, it's often better to ignore them rather than answer them. Cyber bullies, just like other bullies, may be angry or disturbed people — and may be looking for attention or a reaction.

Fortunately, most people never experience cyber bullying. But if you're getting cyber bullied and ignoring it doesn't make it go away, getting help from a parent, school counselor, or another trusted adult may be a good idea. That's especially true if the cyber bullying contains threats.

## **Online Annoyances**

Although email is relatively private, hackers can still access it — or add you to their spam lists. Spam, like advertisements or harassing or offensive notes, is annoying. But spam blockers can keep your mailbox from getting clogged. Many service providers will help you block out or screen inappropriate emails if your parents agree to set up age-appropriate parental controls.

If you don't recognize the sender of a document or file that needs to be downloaded, delete it without opening it to avoid getting a virus on your machine. Virus protection software is a must for every computer.

You can also buy software that helps rid your computer of unwanted spyware programs that report what your computer is doing. Some service providers make software available to protect you from these and other online annoyances, such as blockers for those in-your-face pop-up ads.

If you do invest in protective software, you'll need to keep it updated to be sure it continues to do its job as new technologies evolve.

## **Questions:**

- 1. What is the first rule of smart web surfing?**
- 2. What items should never be in your screen name or email address?**
- 3. What is "cyber bullying"?**
- 4. Who should you get help from if you are "cyber bullied"?**
- 5. Why is it important to protect your information on your computer?**

# Concussion risks higher for youth

By Anahad O'Connor/ New York Times / May 13, 2012

During a soccer game two years ago, Megan Wirtz, a goalkeeper for her high school team, was bending down to pick up a ball when an opposing player accidentally kicked her in the face.

Her face swollen and bleeding, Megan was taken to an emergency room and stitched up. No one realized she had sustained a severe concussion until three weeks later, when a player ran into her during another game and she fell to the ground with a seizure. Doctors say she experienced what is known as second impact syndrome, a sequence of events in which a child or teenager sustains a hit before a concussion fully heals, which can cause the brain to bleed or swell, even if the second impact is a moderate one.

"In retrospect, we hadn't thought as much about her brain as we clearly should have," said her mother, Barbara Wirtz, a nurse in East Lansing, Mich. "She doesn't have lingering problems like some players do. We were very lucky in that regard. But the reality is if she continues to play, it could happen again."

New research in the latest issue of *The American Journal of Sports Medicine* shows that athletes such as Megan may be particularly susceptible to the damaging effects of a concussion. The research found that younger athletes and those who are female show more symptoms and take longer to recover from a concussion than athletes who are male or older.

More than 1.6 million Americans sustain a sports-related concussion every year, and a growing number occur among high school and college athletes. According to federal statistics, more than 150,000 teenage athletes sustained concussions on the playing field from 2001-05, though that figure accounts for only those who were taken to emergency rooms, so the true number, experts say, is most likely much higher.

While researchers have known that girls run a greater risk of sustaining concussions than boys playing the same sports, the new study is among the first to look at the effect of both age and sex on a range of symptoms.

The findings suggest that because of anatomical differences that make them more vulnerable, female athletes, and younger athletes in particular, may need to be managed more cautiously after a concussion, said Tracey Covassin, an associate professor of kinesiology at Michigan State University and the lead author of the report.

"Parents need to understand that if their daughter has a concussion, that they may potentially take longer to recover from that concussion than their son who is a football player," she said.

Over two years, Covassin and her colleagues followed a large group of high school and college athletes from California, Michigan, Louisiana, and Tennessee. At the start of the study, the athletes were given baseline tests that looked at memory and other cognitive skills. Those who sustained concussions in the next two years, about 300 in all, were given three different post-concussion tests commonly used in professional sports.

Overall, after concussions, the high school athletes performed comparatively worse for their age than older college athletes on measures of verbal and visual memory, and female athletes reported more symptoms and showed greater declines in visual memory compared with their male counterparts.

The cognitive impairments were also more likely to persist over time in younger athletes, lasting an average of 10-21 days after a concussion in high school students. That is about two to three times as long as the five- to seven-day period of persistent symptoms that has been documented in college athletes.

Researchers say that younger athletes could be at greater risk of damage from a concussion because their brains are not fully developed. There is also some evidence that young women may suffer more symptoms than young men because of higher estrogen levels, which may exacerbate brain injury, as well as greater rates of blood flow and higher metabolic needs in the brain, which may make symptoms more pronounced.

But, says Mark Hyman, author of "Until It Hurts: America's Obsession With Youth Sports and How It Harms Our Kids," girls may also just be more willing than boys to admit to injury and to seek treatment.

"We don't expect girls to be indestructible, as we do boys," who may be more likely to play through pain to avoid being sidelined in their sport, Hyman said. "Attitudes are changing about that. But not fast enough."

The findings also highlight the dangers of treating children and teenagers as "miniature adults," he added. "The brain and head of a small child are disproportionately large for the rest of the body," he said. "The result is that their heads are not as steady on their shoulders. When they take a big hit in a football game or are slammed with an elbow in a soccer game, their brains move inside their skulls. That's when concussions occur."

As for Megan, she continues to play soccer, but under strict rules. Her parents attend every game, and are more alert to potential problems.

"I think we're better at assessing the symptoms of a concussion now," Barbara Wirtz said. "We're a little more watchful and demanding that coaches don't keep her in if there's any question at all that she got knocked around."

### **Questions:**

1. Define "second impact syndrome".
2. Why is "second impact syndrome" so serious?
3. Although statistics state more than 150,000 teens get concussions from sports, the number is probably higher; why?
4. Who seems to suffer the most from concussions? (Support your answer)
5. "The findings also highlight the dangers of treating children and teenagers as "miniature adults"...Explain why this is true.



## MTV's '16 and Pregnant,' Derided by Some, May Resonate as a Cautionary Tale

By [ANNIE LOWREY](#) JAN. 13, 2014 New York Times

WASHINGTON — Kailyn Lowry, at age 17, decided to let [MTV](#) film her [pregnancy](#) and the birth of her first child in the hope of persuading other young men and women to wait to start a family.

"I did get two awesome blessings," said Ms. Lowry, now 21 and married with a second child. "But I still haven't gotten my bachelor's degree, because, one, day care is so expensive and, two, how do you balance studying and having little ones at home?" Ms. Lowry's cautionary tale seems to have made an impression on at least some viewers. A [new economic study](#) of Nielsen television ratings and birth records suggests that the show she appeared in, "[16 and Pregnant](#)," and its spinoffs may have prevented more than 20,000 births to teenage mothers in 2010.

The paper, to be released Monday by the [National Bureau of Economic Research](#), makes the case that the controversial but popular programs reduced the teenage birthrate by nearly 6 percent, contributing to a long-term decline that accelerated during the recession. "It's thrilling," said Sarah S. Brown, the chief executive of the National Campaign to Prevent Teen and Unplanned Pregnancy, a nonprofit group in Washington. "People just don't understand how influential media is in the lives of young people."

Each episode of "16 and Pregnant" follows a different teenager through her pregnancy, delivery and the first weeks of parenthood. Its "[Teen Mom](#)" spinoff series, the latest season of which debuts on Jan. 21, follows up with the mothers and their children. The depiction of both joy and hardship is unflinching, with angry parents, medical complications, lost sleep, financial difficulties and fights with absentee boyfriends. The two shows are both among MTV's most watched, with some episodes drawing more than three million viewers, many of them young women. But the shows also have critics who say they glamorize teenage parenthood — especially since many of the mothers have become celebrities as a result of the show.

Farrah Abraham, for instance, appeared in a widely distributed sex tape and is now on the VH1 show "Couples Therapy." A tabloid favorite, Jenelle Evans, has publicly documented her problems with [drug abuse](#) and has been repeatedly arrested. "[Only 40 percent](#) of teenage mothers ever graduate high school; two-thirds of families begun by an unmarried teen mother are poor," said one review of the program by the Media Research Center, a conservative group. "So what does MTV do? It shows how cool [teen pregnancy](#) is with a new reality series."

But the show — in part by educating teenagers about the difficulty of having a child, in part by stressing the consequences of unprotected sex and in part by fostering a conversation about contraceptives and pregnancy — seems to have reduced the rate of teenage births, according to the economic analysis by Melissa S. Kearney, the director of the Hamilton Project, a research group in Washington, and Phillip B. Levine of Wellesley College.

Ms. Kearney and Mr. Levine examined birth records [and Nielsen television ratings](#), finding that the rate of teenage pregnancy declined faster in areas where teenagers were watching more MTV programming — not only the "16 and Pregnant" series — than in areas where they did not. The study focuses on the period after "16 and Pregnant" was introduced in 2009 and accounts for the fact that teenagers who tuned in to the show might have been at higher risk of having a child to begin with.

"The assumption we're making is that there's no reason to think that places where more people are watching more MTV in June 2009, would start seeing an excess rate of decline in the teen birthrate, but for the change in what they were watching," Mr. Levine said. Researchers who had reviewed the paper said that its conclusions, as striking as they were, seemed sound, while stressing that every study has limitations. For example, there is no way to know whether individual viewers of the program changed their behavior by avoiding unprotected sex, but the researchers were able to correlate higher viewership over all with reduced birthrates. "It's a substantial and an important finding," said Diane Schanzenbach of Northwestern University. "If they told us this cut the rate in half, I wouldn't believe it," she added.

The study also explores how "16 and Pregnant" might have influenced teenagers' behavior. For example, the two economists showed that social-media postings about [contraception](#) and Internet searches on the topic spiked sharply whenever the show was being broadcast. Despite the criticism of the program and the mothers it depicts, teenagers who have seen it said it helped demonstrate how hard being a young parent could be, and began a conversation about how a teenager might end up in that circumstance.

"Watching 'Teen Mom,' you're close to the characters," said Kendall Schutzer, 17, a senior at a Washington high school. "You're watching them go through their day. You're seeing what different aspects of life are like with a child. I don't know how else you could get to know something like that." Malachi Stoll, also 17, said that the show gave him and his classmates an easy way to talk about a "taboo" topic. But Mr. Stoll, a senior at a Maryland high school, said he felt it did not depict the full extent of the challenge of teenage parenthood. "The show only documents those first nine months, and maybe a little after," he said. "Does the girl finish high school? Where does the child end up? Those are topics that are very difficult to document, but important to getting the message across of what the ramifications are."

The show and its spinoffs seem to have helped accelerate a long-term decline in the teenage birthrate. Ms. Brown said that several factors had driven it, including better use of contraception and the tendency of teenagers today to have fewer sexual partners than their predecessors did. "It's less sex and more contraception," Ms. Brown said. In 1991, [62 teenage girls](#) out of every 1,000 gave birth. By 2007, that ratio had fallen to 42 out of every 1,000. The latest recession and slow recovery caused the birthrate to drop more rapidly, to 29 out of every 1,000 by 2012. The effect of "16 and Pregnant" could account for about one-third of the decline during an 18-month period through 2010, the study found. The measured impact on fertility was greatest for black teenagers, who tend to be more likely to have children than their white and Asian counterparts.

Continuing to pare the rate of accidental and teenage childbearing would have broad, long-term economic effects, experts say. "Families born by accident, rather than design, are bad for men, bad for women and really bad for kids," said Kathryn Edin, a poverty researcher at Harvard.

"Rising inequality and declining prospects for people at the bottom have created a situation where it doesn't matter that much for these teenagers," she said of the very low-income teenagers who are more likely to have a child. "It does not seem like their life prospects are going to be significantly harmed by having a child, because they're so disadvantaged already." Ms. Edin said that shows like "16 and Pregnant" might help break down the "don't ask, don't tell" conditions that lead to teenage pregnancy, where partners do not communicate with one another about their expectations.

The National Campaign said that the study provided more evidence that the show could act as a powerful educational tool. "You can have all the sex-ed you want," Ms. Brown said, "but if you can say, 'Could that happen to me?' That brings a reality and a heightened connection that is very significant for teenagers."

# 9 things everyone should know about the drug Molly

The drug called Molly isn't what most of its users think it is. If you Google "Molly," many articles say the drug is "pure" MDMA, the active ingredient in Ecstasy.

Users often talk about the "purity" of taking Molly, as if it's somehow better; after all, MDMA was originally developed as a medication to treat depression. But today's Molly is most often not MDMA -- in the last few years, the drug has become a toxic mixture of lab-created chemicals, according to the U.S. Drug Enforcement Administration.

## **Here are nine things everyone should know about this rapidly changing party drug:**

### **1. What is Molly?**

Someone who buys or takes Molly now is probably ingesting dangerous synthetic drugs that have not been tested and are produced in widely varying strengths. The DEA says only 13% of the Molly seized in New York state the last four years actually contained any MDMA, and even then it often was mixed with other drugs. The drugs frequently found in Molly are Methylone, MDPV, 4-MEC, 4-MMC, Pentedrone and MePP.

### **2. What does Molly do?**

The lab-created chemicals mimic the effects of MDMA; most of them are central nervous system stimulants that cause euphoric highs. They can also cause a rapid heartbeat, high blood pressure, blood vessel constriction and sweating, and can prevent the body from regulating temperature. Some of the chemicals have been reported to cause intense, prolonged panic attacks, psychosis and seizures.

After they wear off, the chemicals can cause devastating depression. Several of these compounds have caused deaths.

### **3. Who is using Molly?**

Molly is being marketed to young first-time drug abusers between the ages of 12 and 17, as well as traditional rave, electronic dance music fans who may think they're getting MDMA. "Our kids are being used as guinea pigs by drug traffickers," says Al Santos, associate deputy administrator for the DEA.

### **4. What does Molly look like?**

Molly can take many different forms, although it's most often found in a capsule or powder. The DEA has also seen Molly applied to blotting paper, like LSD, and in injectable form.

### **5. What makes Molly so dangerous?**

Molly is dangerous because of the toxic mix of unknown chemicals; users have no idea what they're taking or at what dose. Unlike MDMA and other illegal drugs that have known effects on the body, the formulas for these synthetic drugs keep changing, and they're manufactured with no regard to how they affect the user.

"You're playing Russian roulette if you take these compounds because we're seeing significant batch-to-batch variances," Santos says.

For example, officials have found completely different ingredients in drugs sold in the same packaging. Santos also says the amount of active ingredients can be dangerously different, because "the dosing for these sorts of drugs are in the micrograms. The room for error is tremendous, and we've seen a lot of deaths with some of these compounds."

The DEA has developed its own reference materials for state and local law enforcement because they were encountering so many different drug compounds they'd never seen before. At the DEA testing lab, technicians are constantly trying to unravel the chemical makeup of newly discovered drug compounds that have been seized.

## **6. Where do the chemicals come from?**

Almost all the chemicals in Molly and other synthetic drugs come from laboratories in China. Chinese chemists sell the drugs online, and middlemen in the United States and around the world cut it with other substances, and either place it in capsules or sell it as powder. Other kinds of synthetic drugs can be sprayed onto plant material and smoked, such as synthetic marijuana.

But it's difficult for law enforcement to keep track of all the chemicals. The DEA says it's seen about 200 individual chemical compounds since 2009 and 80 new compounds since 2012. As soon as a compound is discovered and banned, another one is created to take its place.

Interestingly enough, the formulas for these drugs were discovered by legitimate scientists working on new medications. The formulas couldn't be used as medicine because of the stimulant or hallucinogenic effects they had users, but the "recipes" for the drugs still remain.

Clandestine chemists have used the scientific literature to create hundreds of new chemical compounds for the sole purpose of getting people high. There is no known legitimate purpose for any of these chemicals.

## **7. How widespread is the problem?**

Huge. The fastest-emerging drug problem in the United States is the synthetic drug market, which now includes Molly. The chemicals in Molly have been found in nearly every state in the U.S.

And it's a multibillion-dollar business. In two days, the DEA seized \$95 million off drug traffickers during a crackdown. It is a growing problem in Australia, New Zealand and Europe as well.

## **8. What's being done about it? Why can't the government just make it illegal?**

Congress passed the Synthetic Drug Abuse Prevention Act in July 2012, which controlled 26 compounds by name. But there are hundreds of compounds, and every time the government makes one illegal, chemists alter the formula slightly to make it a substance that is no longer controlled.

U.S. officials say they are discussing the issue with the Chinese government, but most of these chemicals are legal in China.

## **9. How can I tell if someone is using or has used Molly?**

The effects can vary widely, depending on the chemical, but while users are under the influence, they may exhibit the following symptoms: sweating, jaw clenching, violent or bizarre behavior and psychosis.

After the drug has worn off, a user may show signs of depression or may not be able to get out of bed for an extended period of time.

### **ANSWER THE FOLLOWING QUESTIONS:**

- 1. What do most users think "Molly" is?**
- 2. According to the DEA, what percent of Molly seized in NY actually contains MDMA?**
- 3. What do you think is meant by the following quote from the article?  
"Our kids are being used as guinea pigs by drug traffickers."**
- 4. What makes Molly so dangerous?**



# MARIJUANA FACTS: BREAKING DOWN THE MYTHS

## Pre/Post Test

- \_\_\_ 1. Marijuana is addictive.
- \_\_\_ 2. The main active ingredient in marijuana is THC.
- \_\_\_ 3. Marijuana use can negatively affect performance in sports and school.
- \_\_\_ 4. Driving under the influence of marijuana is dangerous.
- \_\_\_ 5. Most people who use "harder" drugs used marijuana first.

**M**arijuana use among teens had been on the decline since the mid-1990s—until now. According to the 2010 *Monitoring the Future* survey, teen marijuana use is no longer declining; in some cases, it is even increasing, particularly among eighth graders, the youngest group studied.

Why? One possibility is that some teens don't see marijuana as harmful . . . or at least *that* harmful. In fact, that same survey shows that in recent years, fewer teens think using marijuana regularly is risky at all.

Why are more teens so convinced that using marijuana isn't harmful? The answer to this question may be right in front of you—on your music player, your cell phone, your computer, or your TV. In fact, the myth that marijuana is no big deal is nearly everywhere.

"The messages getting to young people are very mixed and probably contributing to the misperception that marijuana isn't dangerous or harmful," says Dr. Susan Weiss, a scientist at the National Institute on Drug Abuse (NIDA). "We are concerned about this because we know that as teens' perception of risk goes down, their use goes up."

To make smart decisions about marijuana use and your health, you need to know essential facts about the effects of marijuana.

**SCIENTIFIC  
FACT**

**Marijuana  
is addictive.**

**T**he main active ingredient in marijuana, THC (delta-9-tetrahydrocannabinol), stimulates brain cells to release the chemical dopamine, which creates a feeling of pleasure. This effect is partly responsible for the "high" a person feels when he or she smokes marijuana. It is one of the main reasons people use marijuana again and again, which can lead to addiction.

You may be surprised to know that 1 in 11 adults who use marijuana become addicted. And the younger someone starts smoking, the higher the risk. One in six people who start in their teens will become addicted.

FROM SCHOLASTIC AND THE SCIENTISTS OF THE NATIONAL INSTITUTE ON DRUG ABUSE, NATIONAL INSTITUTES OF HEALTH, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

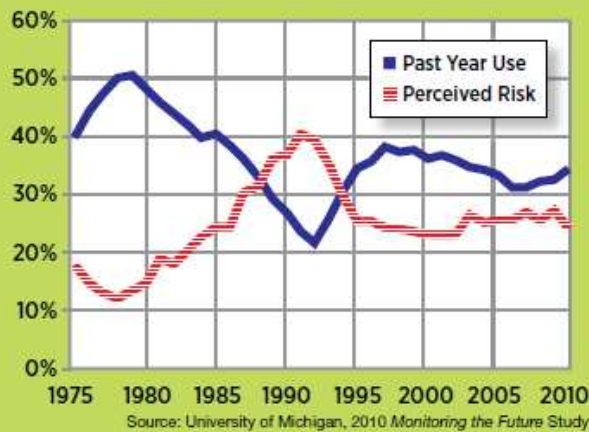
**SCIENTIFIC FACT****Marijuana use can negatively affect your performance in school and athletics.**

THC affects a part of the brain called the hippocampus, which is critical for processing and storing new information, making it difficult to learn. THC also affects attention, impairing your ability to do complex tasks that require focus and concentration. These effects can last even after the high is long gone, especially for frequent users of marijuana, and that can make it harder for them to do well in school.

In fact, research has shown that compared with those who don't smoke marijuana, students who do are more likely to drop out.

What about sports? THC also affects parts of the brain that control timing,

Percentage of U.S. 12th-Grade Students Reporting Marijuana Use vs. Perceived Risk of Marijuana Use



This graph shows that when more teens perceive marijuana use to be risky, marijuana use among teens decreases. When more teens believe marijuana use is *not* harmful, use of the drug increases.

**Marijuana Facts: Now You Know**

**Q:** Why do people say that marijuana is a "gateway" drug?

—Student, McCreary Academy, Kentucky

**A:** Most people who use other "harder" drugs used marijuana first, but not everyone who uses marijuana will go on to use other drugs. One reason may be that marijuana tends to be more available to teens, so it's often one of the first drugs they try. It may then put teens in contact with others who use drugs, perhaps increasing the availability of other drugs. But "gateway" drug or not, marijuana has its own risks.

—David Shurtleff, Acting Deputy Director, NIDA

For more information on drugs, go to <http://teens.drugabuse.gov> or [www.scholastic.com/headsup](http://www.scholastic.com/headsup).

**SCIENTIFIC FACT****Driving under the influence of marijuana is dangerous.**

The skills you need to drive safely—alertness, concentration, coordination, judgment, and reaction time—are controlled by the parts of your brain affected by THC. This means that smoking marijuana seriously increases the likelihood of a car accident.

Some people think they can compensate for the effects of marijuana by driving

**SMOKING MARIJUANA CAN HURT YOUR ABILITY TO . . .**

- concentrate
- remember what you learned
- focus on projects or tasks
- react quickly while driving
- perform in sports owing to effects on coordination

more slowly or paying closer attention to the road. But that does not work, especially when combined with even a small amount of alcohol.

In fact, marijuana (sometimes in combination with other drugs and alcohol) is the most common illegal drug found in the systems of drivers who die in car accidents (up to 14 percent). Bottom line: It's not safe to drive after smoking marijuana or to ride with a driver who has been smoking marijuana.

**Important Resources**

- For immediate help with a crisis, call **1-800-273-TALK**.
- To locate a treatment center, call **1-800-662-HELP** or visit <http://findtreatment.samhsa.gov>.